United States
Department of
Agriculture

Soil
Conservation
Service

Champaign
Illinois

FLOODPLAIN MANAGEMENT STUDY

LOWER ROCK RUN
WILL COUNTY, ILLINOIS

Illinois
Department of
Transporation

Division of
Water Resources

APRIL 1986

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FLOODPLAIN MANAGEMENT STUDY

LOWER ROCK RUN
WILL COUNTY
ILLINOIS

INTRODUCTION

This report defines the flood characteristics of Lower Rock Run and its tributaries downstream of the Crest Hill corporate limits to the Illinois and Michigan Canal. Also included in the evaluation were Tributaries No. 1, 2, and 3 located on the east side of Rock Run and the old Rock Run channel (referred to as Rock Run South) downstream of the Illinois and Michigan Canal. This report defines the flood hazard to existing buildings to provide a suitable basis for planning of measures to eliminate or reduce flood damages. Listed in Appendix E are the addresses and elevations of buildings located in or near the identified floodplain and the elevations of the 10 percent, 1 percent, and 0.2 percent chance recurrent floods for present and future conditions. Copies of Appendices D and E have been provided to the local entities involved. This report should stimulate preservation of existing natural storage and provide data for proper regulation of any new development in the floodplain areas.

Urban floodprone areas have been identified as a severe problem in Illinois. Watershed urbanization and development within and upstream of the floodplain areas intensify this problem. Currently there are 793 Illinois communities identified as having flood problems. As of March 1, 1985, 735 communities

within Illinois are participating in the National Flood Insurance Program (NFIP). The Illinois Department of Transportation, Division of Water Resources (DWR) is the state agency responsible for urban flood problems and for setting priorities for flood studies within urban areas. A joint coordination agreement was executed between DWR and the Soil Conservation Service (SCS) on April 30, 1976 and was revised December 1978 to furnish technical assistance in carrying out these flood hazard studies. The studies are carried out in accordance with Federal Level Recommendation 3 of "A Unified National Program for Floodplain Management," and Section 6 of Public Law 83-566. A Plan of Work was executed by DWR and SCS in April 1982, for the Lower Rock Run Study. The cost of this study was shared by DWR and SCS.

Past studies on this stream include: the Floodplain Information Report for Joliet, Illinois, March 1975 (Reference 1), the Joliet Flood Insurance Study, August 1980 (Reference 2), and the Crest Hill and Joliet Flood Hazard Analysis, September 1981 (Reference 3). These studies identified the flood prone areas along portions of Rock Run for land use conditions at the time of study. Since extensive development is occurring in the watershed, local governments and the State of Illinois desired information as to the impacts of future development on the floodplain of Rock Run and its tributaries. Some local citizens are concerned that future upstream development will increase flood damages. Therefore, they have asked the city to increase channel and bridge capacities near their buildings. In some areas, the floodplain fringe is being filled and new development is occurring.

The State of Illinois was asked to provide assistance in solving the flood problems associated with Rock Run, especially near the I&M Canal. Prior to committing funds for flood control, the state requires completion of a floodplain management study identifying existing hazards and alternative solutions. The state requests that the study display the beneficial and adverse impacts of all alternatives considered.

Detailed hydrologic and hydraulic analyses were made of the Rock Run Watershed incorporating the information prepared in the Crest Hill - Joliet Flood Hazard Analysis. In addition a damage analysis was made for the identified floodprone areas. The maps and profiles in this report are adequate for floodplain regulation of the streams studied in detail. The floodway was delineated in accordance with Chapter 19, Illinois Revised Statutes of 1973, 65F (Reference 8).

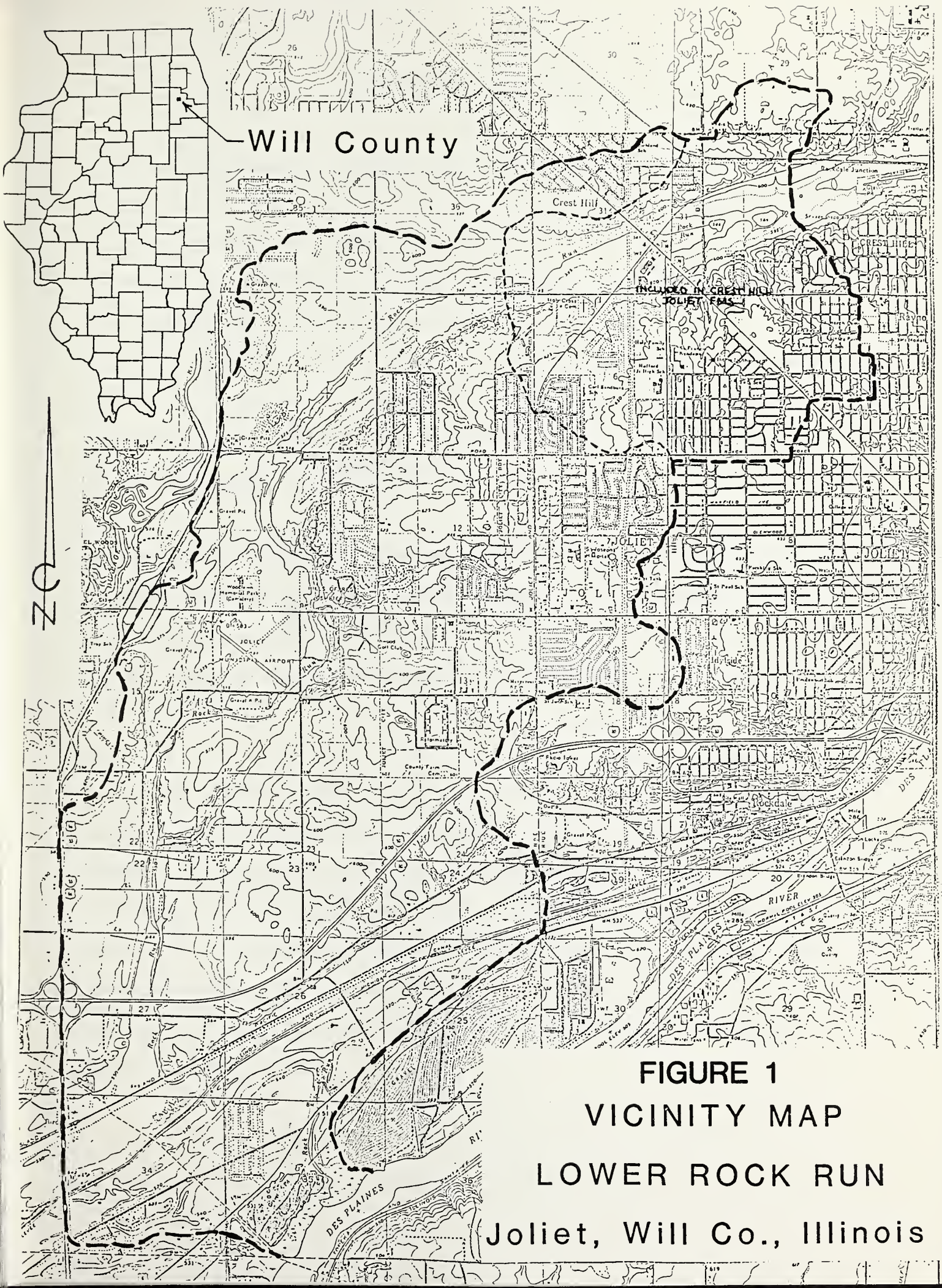

FIGURE 1
VICINITY MAP
LOWER ROCK RUN
Joliet, Will Co., Illinois

DESCRIPTION OF STUDY AREA

The Rock Run Watershed is located in Will County approximately 35 miles southwest of the Chicago Loop. Rock Run is an intermittent stream originating in the residential area of Crest Hill and the north side of Joliet, Illinois. As shown on the Vicinity Map, Rock Run flows west to the Crest Hill corporate limit and then southwest and south on the west side of Joliet. The approximate drainage area of Rock Run is 18.6 square miles at its confluence with the Des Plaines River southwest of Joliet. The upper 3.7 square miles was previously studied by the SCS in 1981 (Reference 3). The hydrologic sub-watershed number is 07120007-010.

The Lower Rock Run Floodplain Management Study is concerned with Rock Run from its junction with the Des Plaines River to the Crest Hill corporate limits near Theodore Avenue and Tributary 1, 2, and 3 and the floodplain along these streams. Rock Run flows through Crest Hill, unincorporated Will County and the City of Joliet.

A limited amount of residential flooding occurs on Rock Run and Tributaries 1, 2, and 3. None of these areas have suffered extensive historical urban damages. The residences and businesses located south of the I&M Canal have had flooding problems in the past. These problems have primarily occurred when the levee along the canal breaks. Currently there is an opening in the levee of the canal approximately 2000 feet west of the Rock Run junction. As long as this opening is maintained, limited flooding damages are expected south of the I&M Canal.

The area has been undergoing rapid development in the last 10 years and is expecting more development in the next 20 years. See figures 4 and 5 for present and projected future land use in the watershed.

The topography of the watershed varies from flat to irregular and rolling with numerous wetland storage areas along Rock Run. There are at least 20 different soil series identified in this watershed typifying the topographical features present (Reference 13). These soils vary from poorly drained soils on floodplains formed over bedrock, to poorly drained soils on floodplains formed in silty alluvial material, to somewhat poorly drained soils formed in glacial lakebeds on uplands, to very poorly drained soils in depressions in uplands formed in silty and clayey, water-deposited materials, to some well drained gravelly loams. The primary series identified include Ashkum, Blount, Brenton, Channahon, Drummer, Elliott, Houghton, Joliet, Lorenzo, Millsdale, Plattville, Rodman, Romeo, Symerton, and Will. All of these soils are either prime or important farmlands except Rodman and Romeo.

The climate of the watershed is classified as humid continental which is characterized by warm summers, cold winters and relatively large daily, monthly and yearly variations in both temperature and precipitation. Average annual precipitation is 34 inches. March through October precipitation averages 3.3 inches monthly. Mean annual runoff is approximately 9 inches or about 27 percent of total precipitation (Reference 6).

During January, normally the coldest month, temperatures range from a normal maximum of 33 degrees F to a normal minimum of 17 degrees F. During July, normally the warmest month, temperatures range from a normal maximum of 87 degrees F to a normal minimum of 64 degrees F. The maximum temperature of 90 degrees F is exceeded on 30 days in a normal summer. The average frost-free season is 160 days (Reference 6).

ROCK RUN CHANNEL PICTURES

NEAR
ESSINGTON
ROAD

NEAR
BLACK
ROAD

NEAR
I&M
CANEL

NATURAL VALUES

The Lower Rock Run Watershed drains an area of 14.9 square miles that has undergone considerable development in the past 20 years. The new development consists of some commercial but mainly single and multiple family residences. The table which follows illustrates this land use change and the estimated land use in 20 years.

LAND USE	APPROXIMATE AREA (% OF WATERSHED)		
	1972	1985	2005 (Est.)
Urban	12%	27%	43%
Agricultural/Idle	78%	63%	47%
Wetlands	10%	10%	10%

Presently approximately 4000 acres of the watershed are being used for agricultural production. It is estimated that 1400 acres of this land will be converted to urban land uses by the year 2005. It is eatimated that most of this land would be classified as prime farmland with the remainder being classified as important farmland. Most of the existing 1000 acres of floodplain is either vacant land, wetlands, or woods. Over one half of this land is not classified as prime or important farmland because of the nearness to bedrock. It is estimated that 50 acres of urban land are presently subject to flooding by the 1% chance (100 year) storm.

The 1981 List of Endangered and Threatened Species of Illinois (Reference 5) cites 45 plant species known to exist in Will County that are officially designated as endangered or threatened. The same list designates the great egret, black-crowned night heron, and upland sandpiper as endangered; the black nose shiner is designated as threatened in Will County.

ROCK RUN HABITAT PICTURES

MALLARD
NEST

MIXED
WILDLIFE
HABITAT

FILLED
WETLAND

Significant wildlife habitat in the Rock Run Watershed exists along the main Rock Run Channel. This consists of a series of wetland areas fringed by trees and open fields from the headwaters to the I&M Canal. Isolated wetland areas are also located along the natural drainage paths downstream of the I&M Canal. Several wetland types including type 1, seasonally flooded flats; type 2, sedge meadows; type 3, shallow marshes; type 4, deep marshes; and type 5, open water wetlands have been observed in the watershed (Reference 3). The abundance of floodplain wetlands and the diversity of vegetation found in them provides good habitat for many species. In addition, many of the threatened and endangered plant species, the great egret and black-crowned night heron are dependant upon wetland habitats for their continued existance. Wetlands also serve as natural storage areas which reduce peak discharges during major storm events. Riparian forests, fallowed fields, grasslands, and agricultural fields also provide important wildlife habitat in the Rock Run watershed.

Primary plant communities in the wooded areas are upland hardwood forest and upland and lowland successional communities. The remaining part of the watershed is either used for row crop production, is vacant land or is developed urban land.

No archaeological sites or historical sites have been identified in the detailed study area.

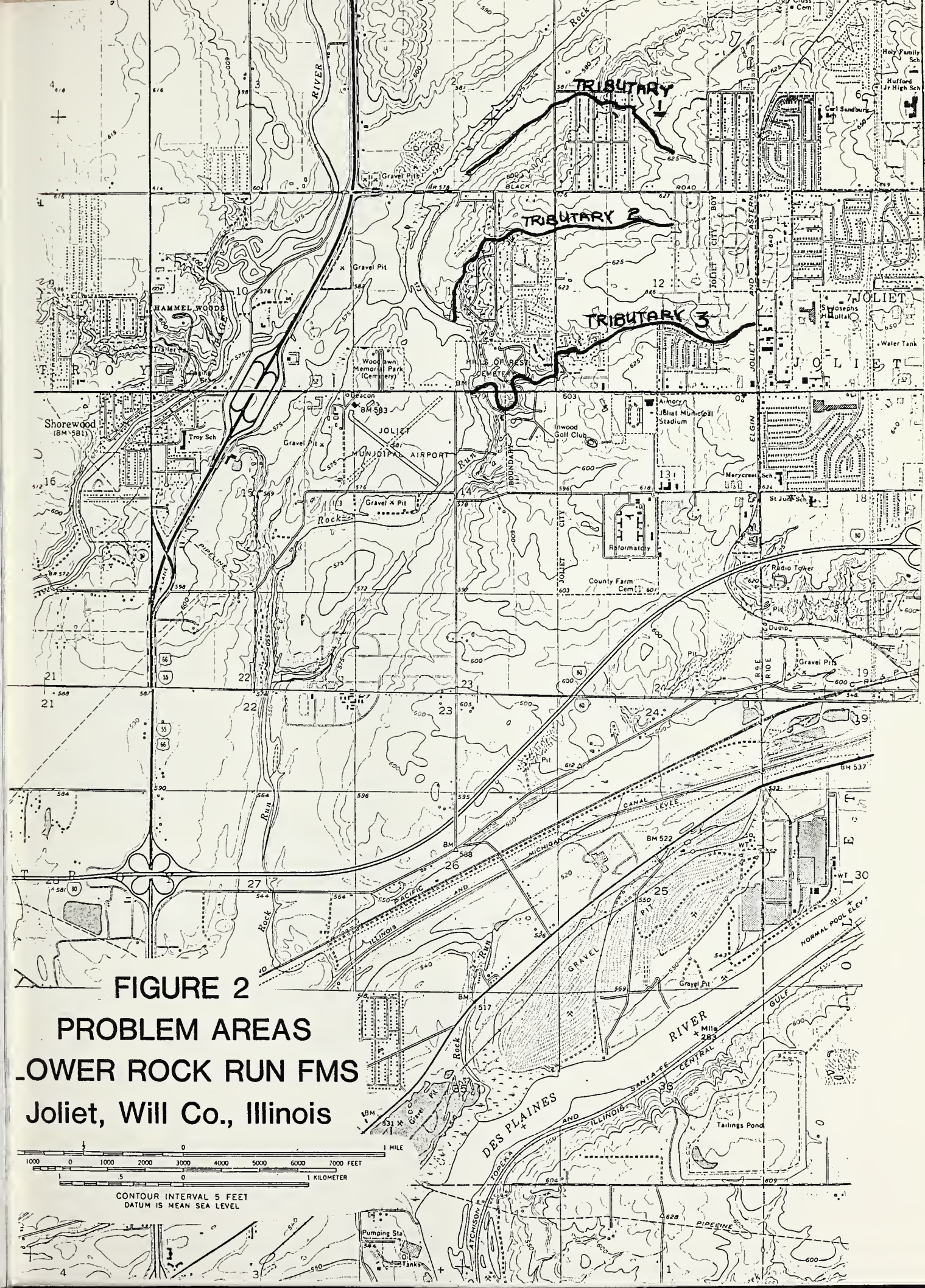

FIGURE 2
PROBLEM AREAS
LOWER ROCK RUN FMS
Joliet, Will Co., Illinois

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

FLOOD PROBLEMS

The areas evaluated for urban damage as part of this study are shown on Figure 2. None of these areas suffer significant damages to residences or commercial properties under present or future conditions. The following tables summarize the number of buildings flooded by the 100 year flood, for present and future conditions, and the estimated average annual damages calculated for each area.

PROPERTIES FLOODED - PRESENT CONDITION

1% CHANCE

LOCATION	NUMBER OF BUILDINGS	AVERAGE ANNUAL DAMAGES
(1) Main channel	1	60
(2) Tributary 1	2	$210
(3) Tributary 2	1	460
(4) Tributary 3	0	10
TOTAL	4	$740

PROPERTIES FLOODED - FUTURE CONDITION

1% CHANCE

LOCATION	NUMBER OF BUILDINGS	AVERAGE ANNUAL DAMAGES
(1) Main Channel	1	70
(2) Tributary 1	3	880
(3) Tributary 2	2	1670
(4) Tributary 3	5	530
TOTAL	11	$3150

Over one half of the buildings subject to damage are unattached garages. No commercial buildings were identified as being subject to flood damage.

The future condition evaluation assumed that existing wetlands along the channel are maintained. The following tables summarize the evaluation by frequency for the watershed.

TOTAL DAMAGE BY FREQUENCY
PRESENT CONDITIONS 1/

Frequency (% Chance)	(Year)	Total Buildings (Number)	Total Damage (1000 Dollars)
0.2	500	8	45.9
1.0	100	4	38.0
2.0	50	2	2.1
10.0	10	1	1.0
50.0	2	0	0

Average Annual Damages = $740

TOTAL DAMAGE BY FREQUENCY
FUTURE CONDITIONS 1/

Frequency (% Chance)	(Year)	Total Buildings (Number)	Total Damage (1000 Dollars)
0.2	500	16	98.0
1.0	100	11	73.8
2.0	50	7	39.7
10.0	10	2	2.1
50.0	2	1	0.9

Average Annual Damages = $3150

1/ Assuming no floodplain or wetland filling and no additional building in the floodplain.

An evaluation was made of the impact of filling the existing wetlands along the main channel to the floodway as defined in the flood insurance study. This evaluation showed as much as a 75% increase in peak discharges and an increase in flood elevations of between 1 and 2 feet along Lower Rock Run. The following table quantifies the damages to existing buildings located in the watershed if the wetlands were filled.

TOTAL DAMAGE BY FREQUENCY

FUTURE CONDITIONS WITH WETLANDS FILLED 1/

Frequency % Chance	Year	Total Buildings (Number)	Total Damage (1000 Dollars)
0.2	500	16	98.0
1.0	100	11	74.9
2.0	50	8	44.8
10.0	10	3	6.6
50.0	2	1	0.9

Average Annual Damage = $4200

1/ Assuming no additional building in the floodplain

The change in damages is limited because only one building has been identified as being effected by the increase in flood depths along Rock Run. Several roads would suffer from increased frequency of flooding if the wetland areas are filled.

EXISTING FLOODPLAIN MANAGEMENT

Currently, the City of Joliet, and unincorporated Will County are participating in the Regular Phase of the National Flood Insurance Program (NFIP). This program provides data to the local government so that they can adopt floodplain management measures. Each Flood Insurance Study (FIS) includes a flood boundary map with a floodway designated to assist the community in establishing the rules it will use to regulate land use in floodplain areas. There are existing flood boundary maps and profiles available for most of Rock Run and Tributaries 1, 2, and 3. These maps and profiles are being used by Joliet and Will County to regulate new construction in the areas subject to flooding.

Based on the survey data collected as part of this study, it appears the FIS profile for Tributary 1 was based on incorrect survey data. For most of the remaining streams, there is not a major difference between the FIS profiles and the profiles in this report.

The engineering department of Joliet has been involved throughout this study and recognizes that the maps included in this report can be used by the Federal Emergency Management Agency (FEMA) to update the flood insurance maps for the streams involved. This report includes both the 100 year (1% chance) floodplain and the 500 year (0.2% chance) floodplain delineations.

In order to provide a national standard without discrimination, the 100 year flood (1% chance) has been adopted by State and Federal agencies as the base flood for purposes of floodplain management measures. The 500 year (0.2% chance) flood is employed to indicate areas of additional flood risk within a community. For all the streams studied in detail, the boundaries of the 100 year and 500 year floods for present conditions have been delineated. These flood boundaries have been determined by using the flood elevations calculated for each valley cross section. (Between the surveyed cross sections, the floodplain boundaries were interpolated using topographic maps prepared at a scale 1 inch = 400 feet (contour interval of 2 feet). In cases where the 100 year and 500 year flood boundaries are close together, only the 100 year boundary has been shown. The boundaries of the floodplains are shown on the floodplain maps.

Small areas within the flood boundaries may lie above the flood elevations and therefore not be subject to flooding. However, due to the limiting scale of the topographic maps used to prepare the floodplain maps, such areas are not shown. The profile sheets in Appendix A should be used to ascertain flood elevations for any specific point along Rock Run and its tributaries for present or future conditions. In addition, Appendix E lists the 10 year, 100 year and 500 year flood elevations at all buildings surveyed in or near the floodplain. Encroachment on floodplains, such as artificial barriers, reduces the water carrying capacity and increases flood heights thus increasing flood hazards in areas beyond the encroachment itself. One aspect of floodplain

management involves balancing the economic gain from the floodplain development against the resulting increased flood hazard. The filling of the previously identified floodway fringe along Rock Run could raise the water surface profiles more than one foot because of the storage impact of the wetland areas.

For purposes of the NFIP, the concept of a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the 100 year floodplain is divided into floodway and a floodway fringe. The floodway is the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment in order that the 100-year flood discharge can be carried without a substantial increase in flood heights. In this case, blockage of either the channel or the floodway overflow areas will result in increasing the flood elevations.

In Illinois, the minimum standard used to define the 100 year floodway is described in the Illinois Revised Statutes of 1973 under 65F, Chapter 19 (Reference 7). In this standard, the encroachment in the floodplain is limited to that which will cause only an insignificant increase in flood heights. The Illinois Division of Water Resources has recommended that the floodway be determined using no more than a 0.1 foot surcharge (Reference 4). The 0.1 foot surcharge floodway proposed for this study was computed by equal conveyance reduction from each side of the floodplain.

As shown on the flood boundary and floodway maps, the floodway boundaries were determined at individual cross sections. Between the cross sections the boundaries are interpolated.

The area between the floodway and boundary of 100 year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the floodplain that could be completely obstructed without increasing the water surface elevations of the 100 year flood more than 0.1 of a foot at any point. The typical relationship between the floodway fringe and the floodway are shown in the floodway schematic (Figure 3).

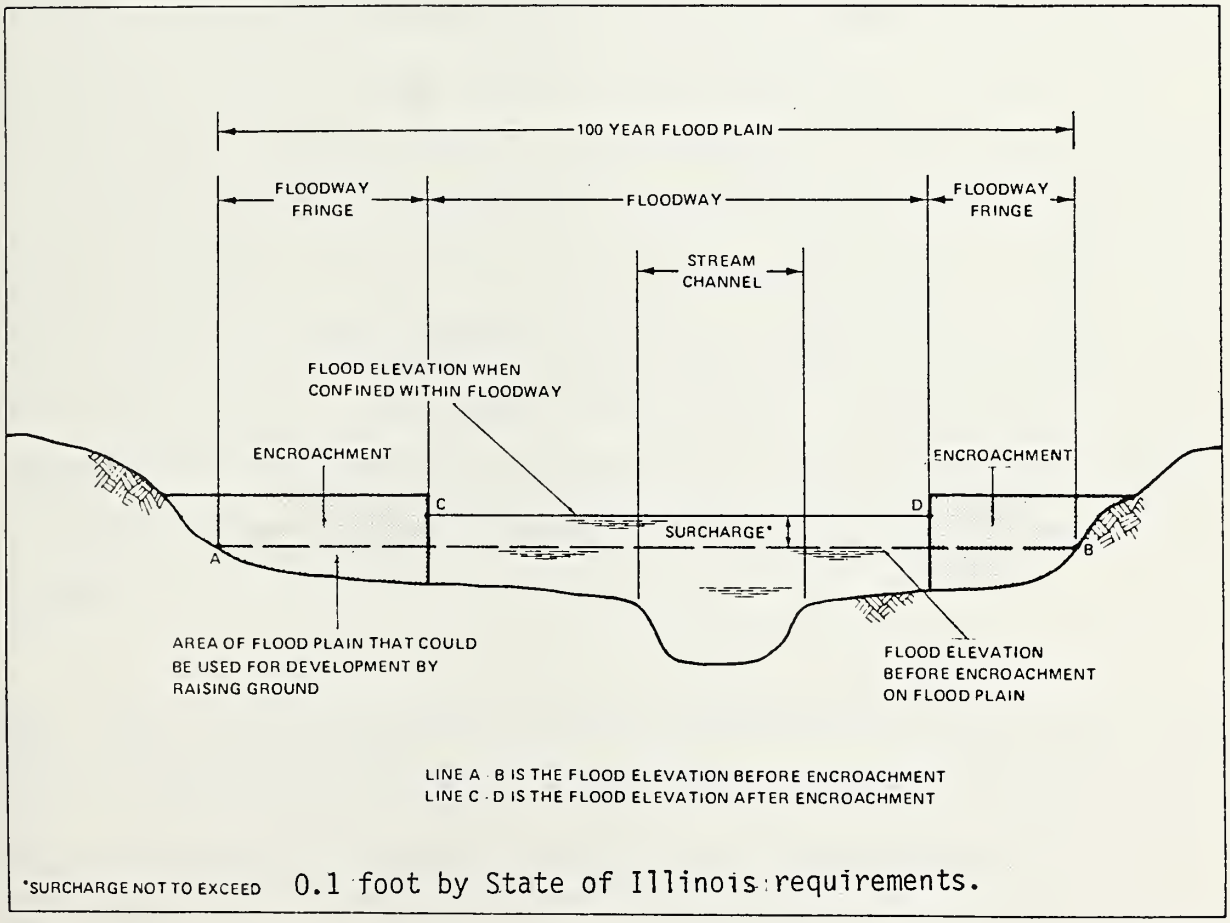

FIGURE 3

FLOODWAY SCHEMATIC

ALTERNATIVES FOR FLOODPLAIN MANAGEMENT

The floodplain management strategies evaluated included no action, and nonstructural measures for future conditions (2005). These conditions assume the development shown on Figure 5 occurs without on-site detention. See Appendix F for a description of evaluation procedures used to determine damages and effects and Appendix E to see impact of future development on floodwater elevations at all surveyed buildings. A brief description of the alternatives follows:

Alternative 1 - Future Conditions (No Action)

Components: This alternative assumes no additional action beyond what is currently being done in the watershed. All new development will be regulated by the City of Joliet or Will County. Where a significant portion of the upstream area is developed without on-site detention, the peak discharges will be increased from present conditions. Currently the city has been enlarging channels where the increased peaks flow through subdivisions. With the maintenance existing large wetland storage areas, these increased peaks will have minimal effect on flood stages along Rock Run. Existing homeowners in floodprone areas will purchase flood insurance to reduce the financial impact of flooding. Areas currently experiencing flood damages will continue to be flooded.

Costs: None - The ongoing costs of this alternative will be determined by the number of individuals who purchase flood insurance ($150 + per household per year) and the costs to the local governments for implementation of floodplain regulations.

Effects: The average annual damages will increase slightly as peak discharges increase in response to the additional development. It is estimated these damages will exceed $3,150 per year in 2005. A total of 11 buildings will be flooded by the 1% chance flood.

Alternative 2 - Nonstructural Alternative

Components: This alternative consists of floodplain management through land use regulations such as zoning, building codes, or flood insurance which are primarily administrative actions and flood proofing. The flood proofing consists of installing sewer check valves, raising existing window wells, and construction of low earth dikes or fills around individual properties. Other nonstructural measures such as relocation of buildings to flood free areas, flood warning system, and floodplain acquistition were determined to be not feasible.

All local governments in the detailed study area are currently cooperating with the National Flood Insurance Program and flood insurance is available for all residents of the floodprone areas shown on the floodplain maps. The maps and profiles prepared as part of this report will be provided to the Federal Emergency Management Agency for possible revision of the regulatory maps for the areas involved. Some of the existing homeowners have installed check valves on their sewer lines to prevent sewer backup.

Costs: The floodproofing of homes would cost $8,000 with an estimated annual cost of $900 including $200 annual O&M. Total Annual Cost = $1040

Effects: All residences subject to damage by floodwater would have the peace of mind of knowing the flood insurance policies would cover them for damages over $200 in a given year. The 4 properties where the floodproofing measures, consisting of 6 to 12 inches of fill and raising existing window wells, are installed will see their annual damages reduced by a total of approximately $2,000 per year. Most of these properties will still be subject to damage by the 500 year flood.

All residents who install the sewer check valves will reduce the worry and damages from sewer backup. Damages to property from sewer backup has not been estimated as part of this study.

The Benefit/Cost Ratio for floodproofing the 4 properties is 1.9:1.

Remaining average annual damages to buildings would be less than $1200.

Because of the limited dollar damage and the scattered location of the buildings subject to flood damage, it was determined that structural measures would not be evaluated. The City of Joliet is installing an enlarged channel with enlarged bridges on Tributary 3. This enlargement will reduce the area subject to overbank flow and may protect the 5 buildings currently identified as subject to damage by the 100 year flood.

It is recommended that the floodplain along Rock Run should remain in its natural condition protected from development so that the floodwater storage and wildlife habitat values of the floodplain are maintained. If a program of on-site detention for all new development in the upland areas is implemented, it will reduce the impact of the new development on peak discharges.

It is recommended that the breach in the existing levee along the I&M Canal be reinforced but the opening maintained as it directs the excess flows from Rock Run away from currently developed areas. In addition an annual inspection and maintenance program should be implemented to maintain the existing levee.

GLOSSARY AND REFERENCES

Glossary

Avg. Annual Damage- The estimated average yearly damage expected to occur during the project evaluation period.

Encroachment- Obstruction in part of a floodplain which reduces floodwater carrying capacity, therefore increasing flood stages.

Floodway- The portion of a floodplain required to convey floodwaters without causing significant increases in flood heights or velocities.

Floodway Fringe Area- Portions of the floodplain outside of the floodway subject to shallow inundation and low velocity flow.

Flood- An overflow of water onto land not normally covered by water. This inundation of land is temporary, and the land is normally adjacent to a river or stream, lake, or other body of water. Normally, a "flood" is considered as any temporary rise of stream flow or stage that causes a significant adverse effect. Adverse effects would be damage to property, sewer backup, creation of unsanitary conditions, erosion, sedimentation, accumulation of debris, or other problems.

Flood Crest- The maximum stage or elevation reached by the waters of flood at a given location. It may be referred to as flood stage or high water elevation.

Flood Peak- The maximum instantaneous discharge at a given location. It usually occurs at or near the time of the flood crest.

Floodplain- The relatively flat area or low lands adjoining the stream channel, or water course, lake, or other body of water, which has or may experience flood inundation.

Head Loss- The effect of natural or man-made obstructions such as small bridge openings, buildings, fill, or accumulation of debris which limits the conveyance of water, causing a rise in upstream water surface elevation.

Profile- A graph showing the relationship of water surface elevation and natural ground elevations to location along the water course. The profile is normally drawn for a specific flood. Also referred to as water surface profile.

100 Year Flood- A flood having a 1% chance of being equalled or exceeded in any one year. It may occur in any year. It is based on a statistical analysis of precipitation and gauge records. Also referred to as a flood with a 100 year recurrence interval.

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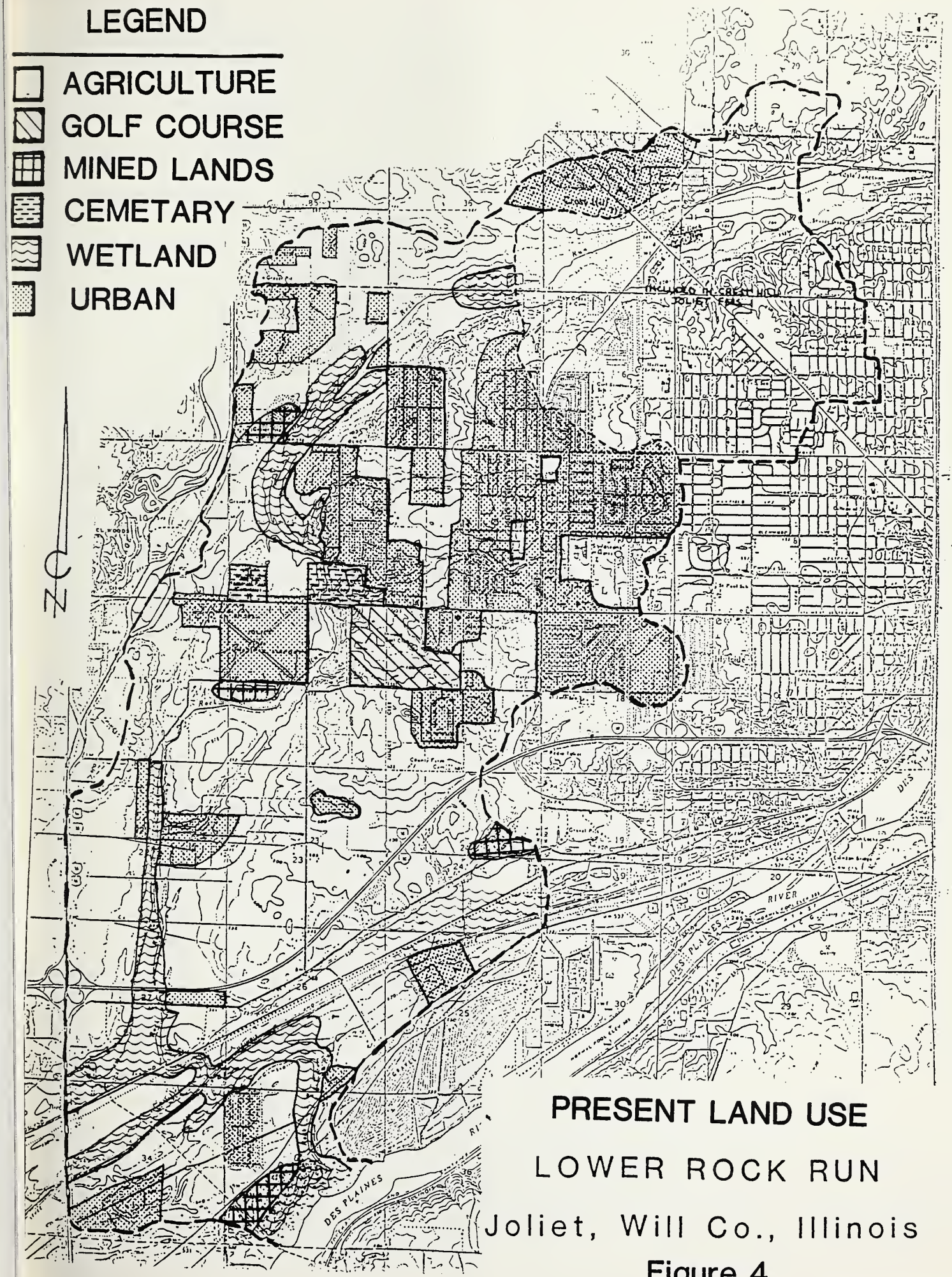
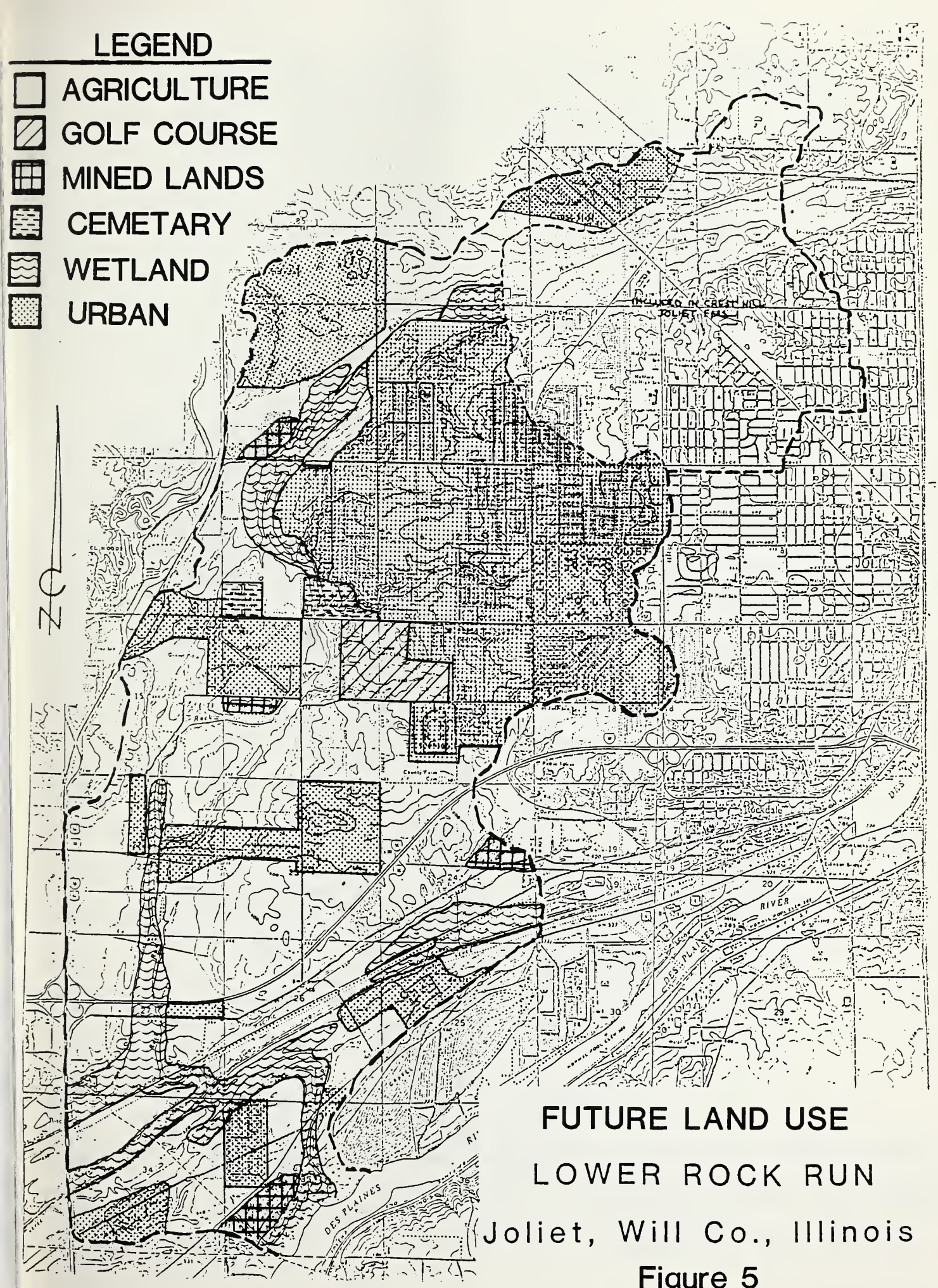


PRESENT LAND USE

LOWER ROCK RUN

Joliet, Will Co., Illinois

Figure 4

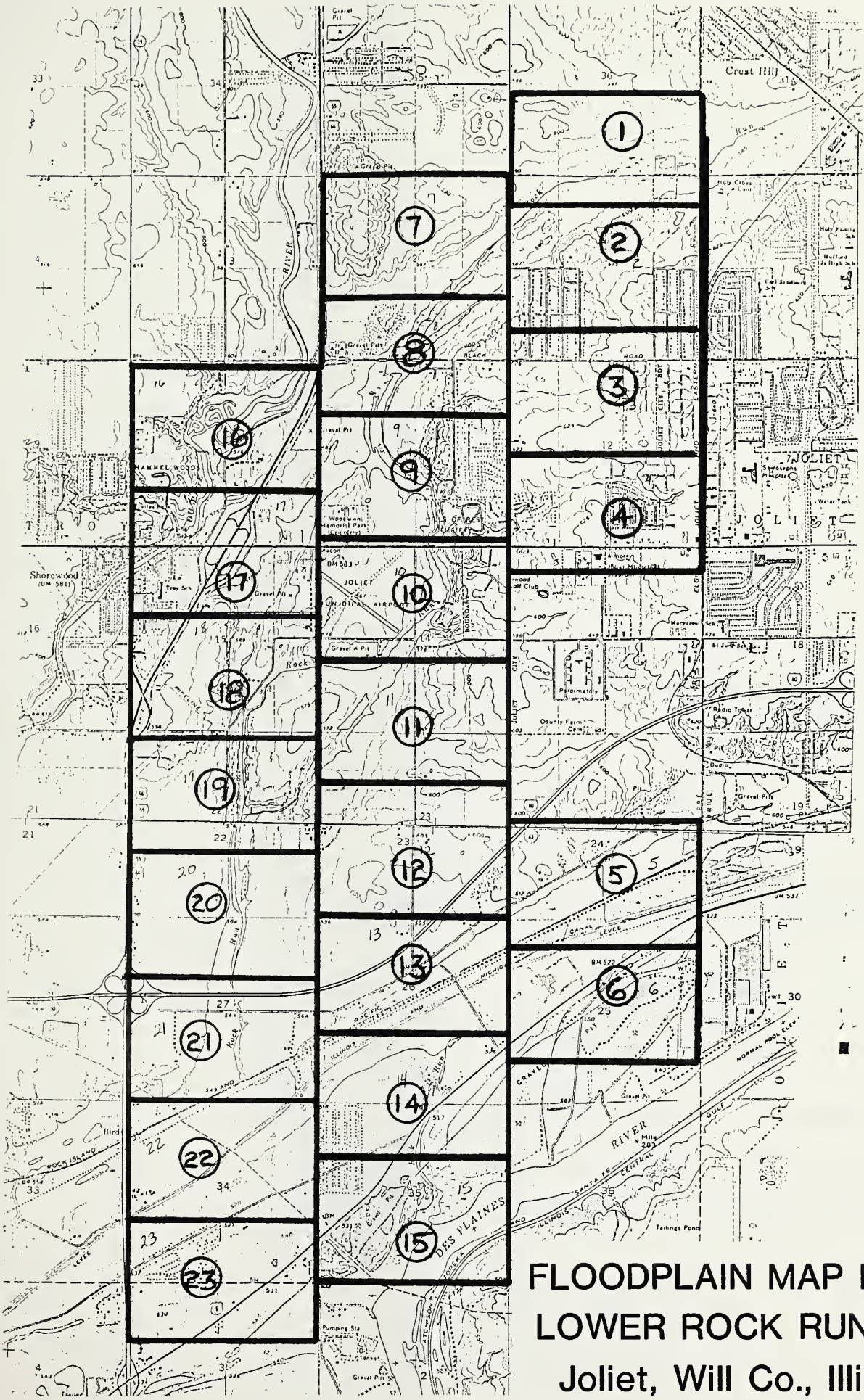


FUTURE LAND USE

LOWER ROCK RUN

Joliet, Will Co., Illinois

Figure 5



FLOODPLAIN MAP INDEX
LOWER ROCK RUN FMS
Joliet, Will Co., Illinois

ESSINGTON

THEODORE

MATCH SHEET 1

MATCH SHEET 2

LIMIT OF STUDY

37709

36809

35335

SWAMP ELEV 581.3

ROCK RUN

WS 584.5

WS 584.5

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 3/80

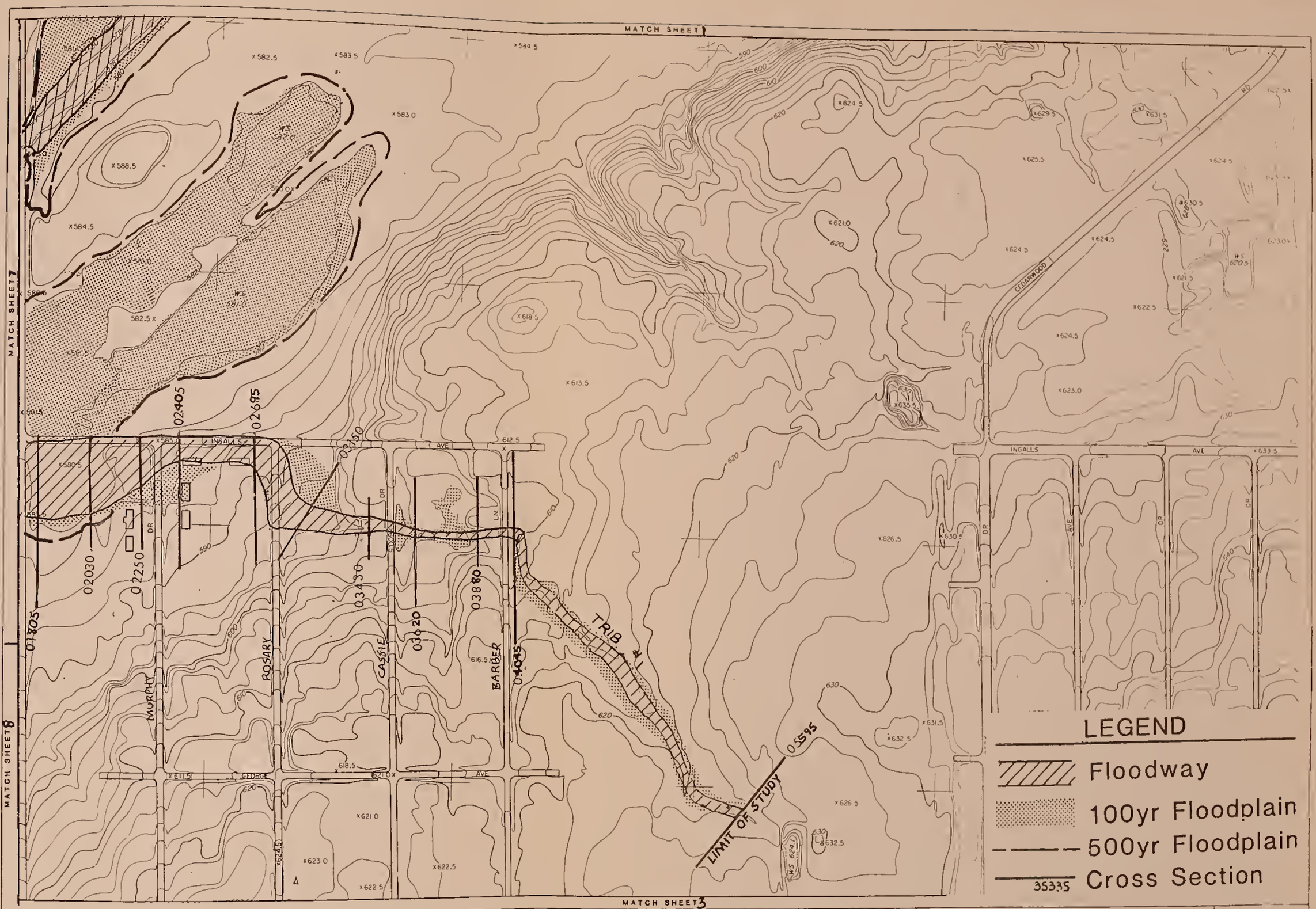
SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 1 OF 23



TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
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SCALE IN FEET
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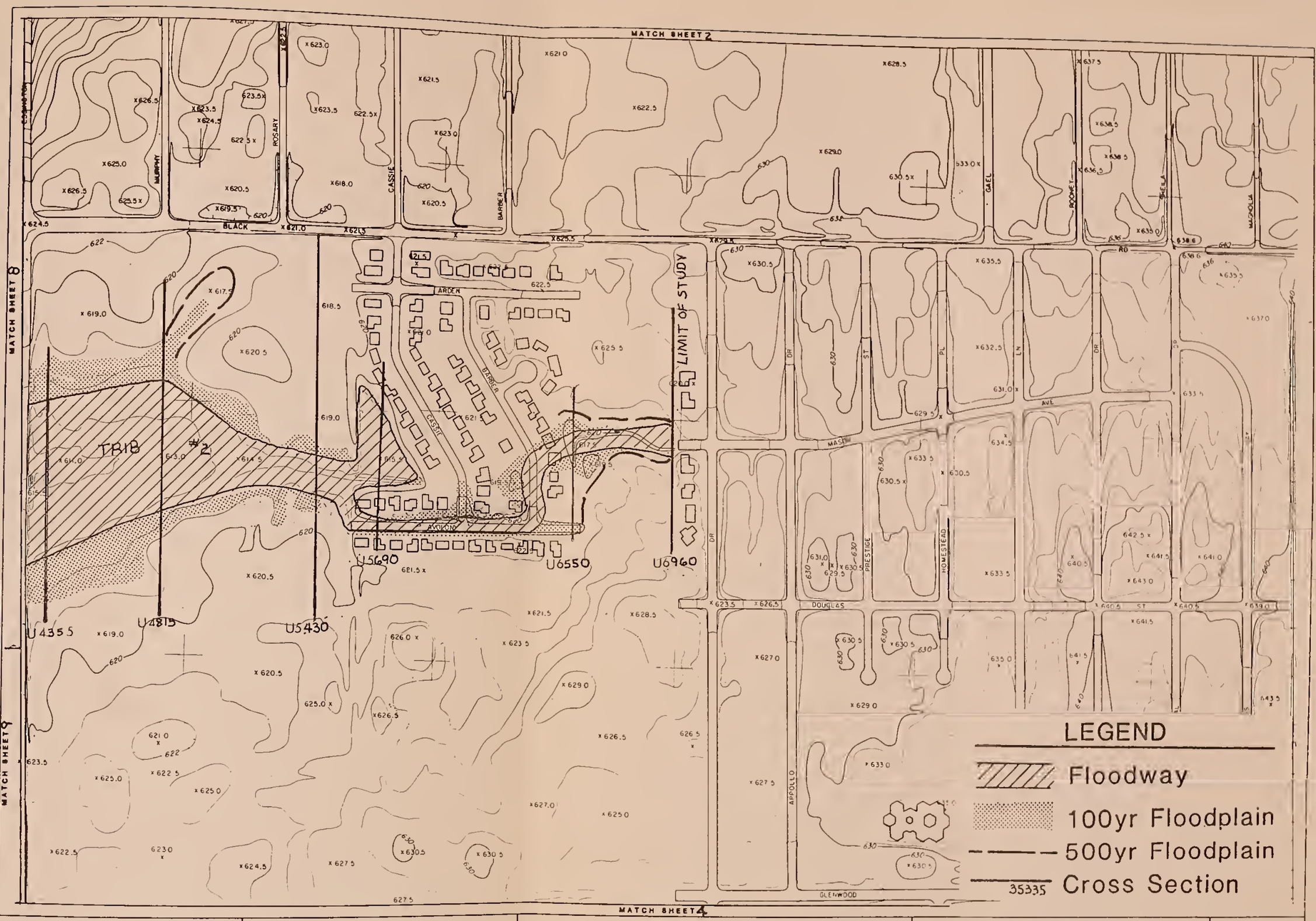
CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
2 OF 23



TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET 200 0 200 400 600 CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 3 OF 23

MATCH SHEET

MATCH SHEET 9

MATCH SHEET 10

Q6890

Q6810

Q5465

Q5150

Q4050

Q9285

TRIB #3

TRIB #3

LIMIT OF STUDY

W JEFFERSON

OAKS

DEER PATH

ARMORY

RICHMOND

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET 200 0 200 400 600 CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 4 OF 23

MATCH SHEET 12

MATCH SHEET 13

MATCH SHEET 6

MOUND

RR

C R I & P RR

M. C. R. R.

S. W. CANAL

ILLINOIS

MICHIGAN

WS 557.5

WS 549.9

WS 544.9

WS 527.9

WS 527.5

WS 522.5

WS 546.1

WS 538.5

WS 532.5

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
5 OF 23

MATCH SHEET 5

MATCH SHEET 13

MATCH SHEET 14

ROUTE 52

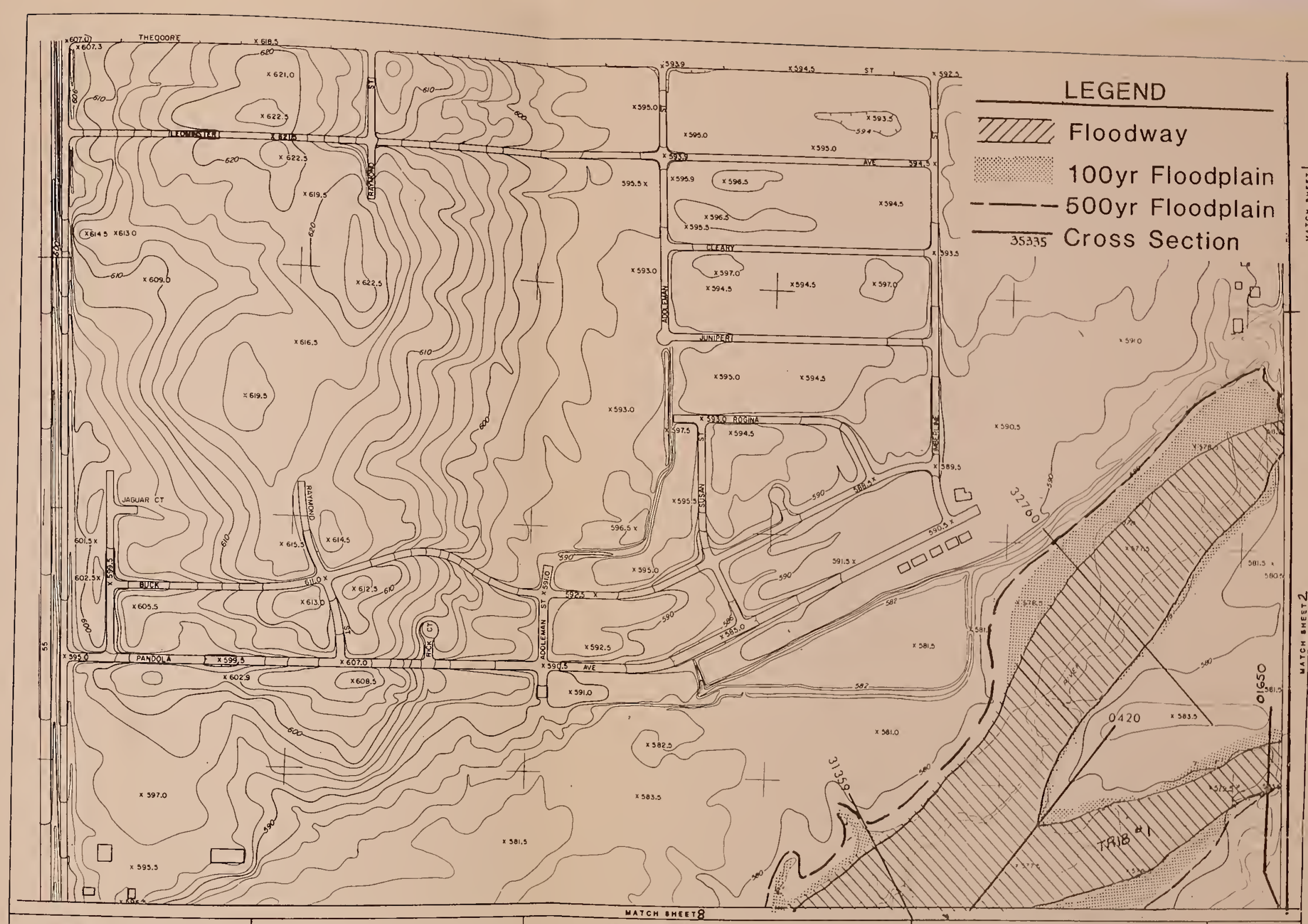
US 6

RR

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET 200 0 200 400 800 CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 6 OF 23



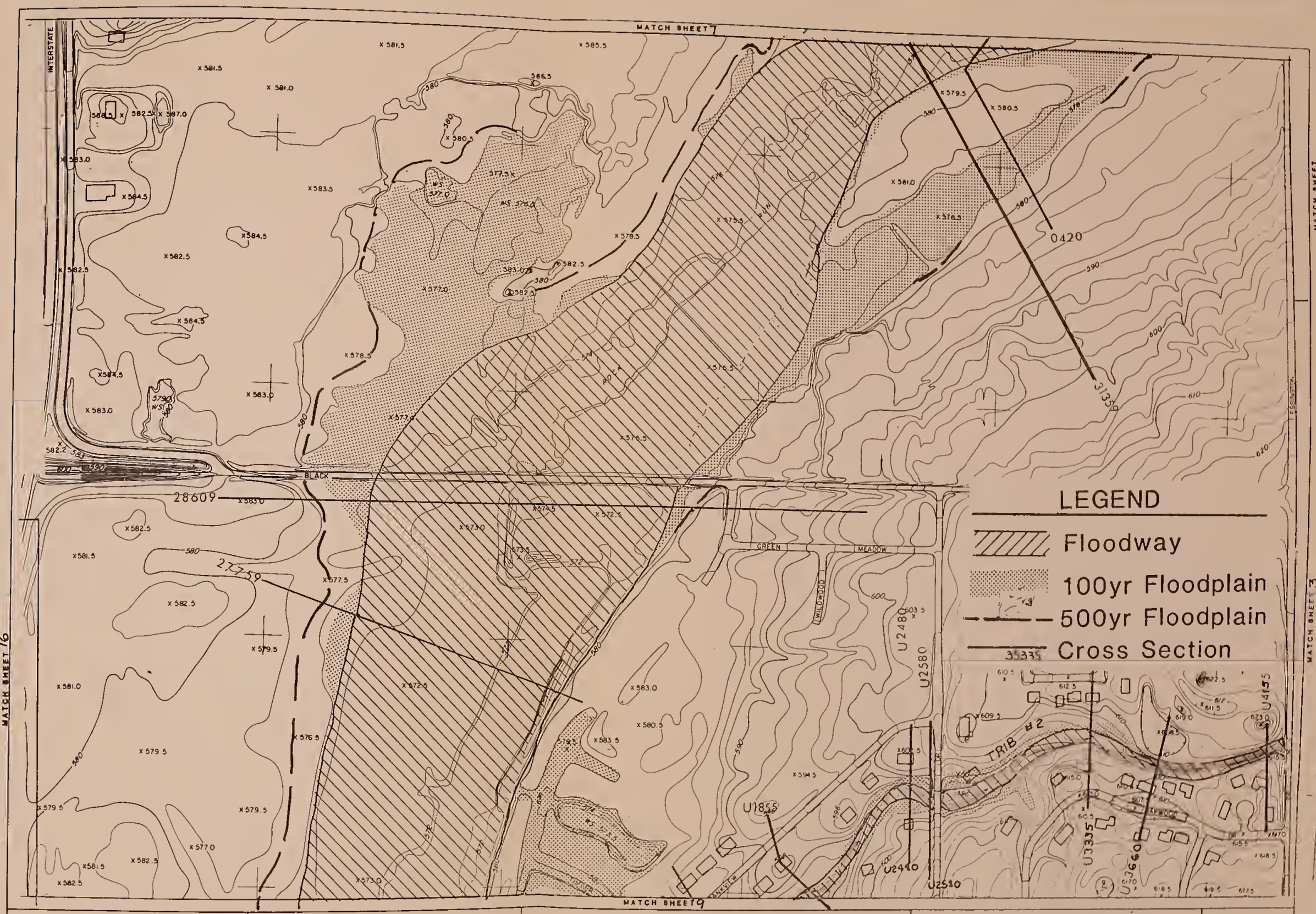
TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 3/80
SCALE IN FEET
200 0 200 400 600
CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
7 OF 23



TOPOGRAPHIC MAP FURNISHED BY

CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 8 OF 23

MATCH SHEET 8

MATCH SHEET 16

MATCH SHEET 3

MATCH SHEET 17

MATCH SHEET 10

MATCH SHEET 4

TRIB #2

TRIB #3

INDIAN WOOD

ROSEMONT

RIDGE

26219

23909

Q3310

Q3085

Q2560

Q2210

Q810

WS 577.0

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP FURNISHED BY
CITY OF JOLIET, ILLINOIS

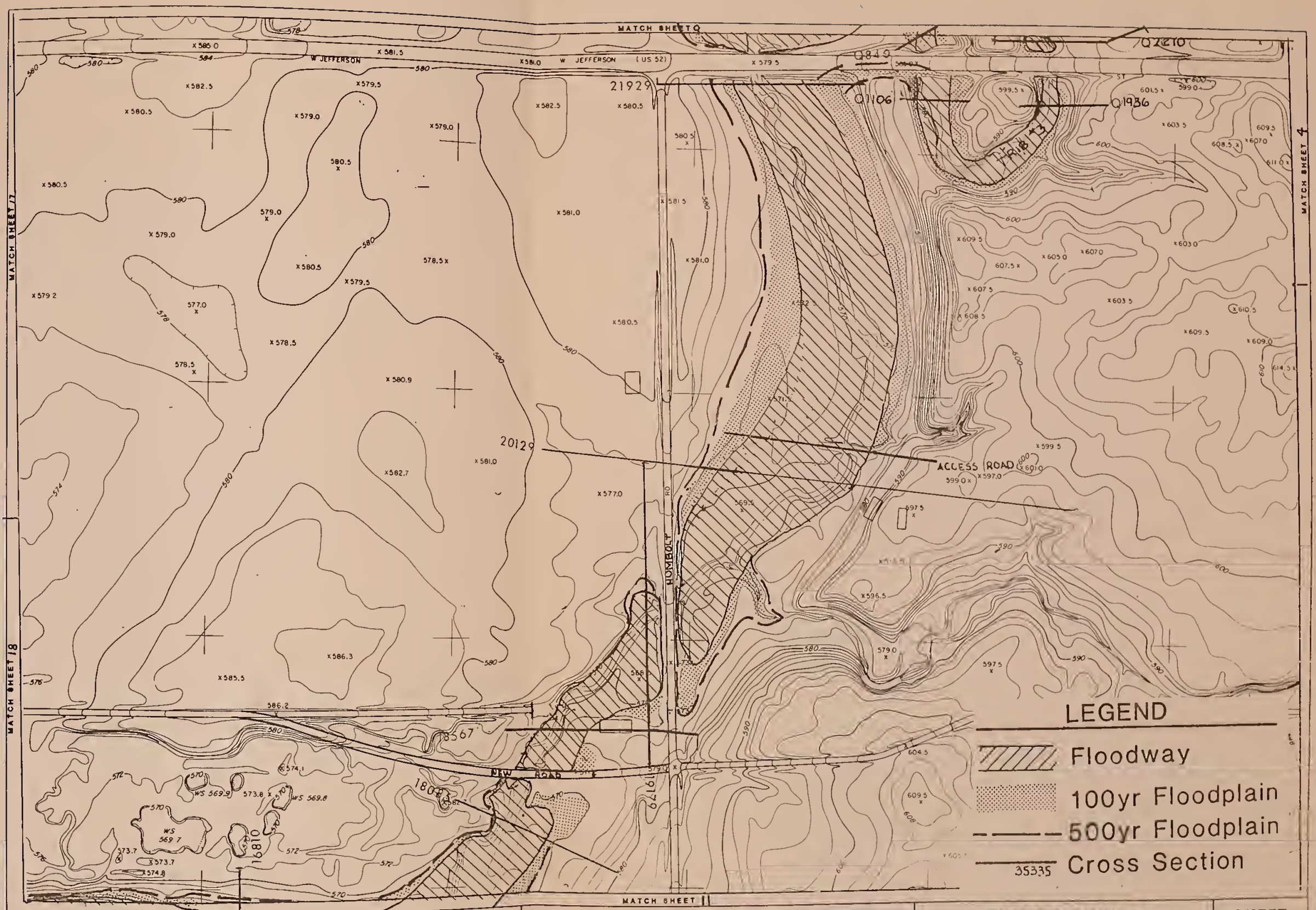
DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600
CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 9 OF 23



TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
10 OF 23

MATCH SHEET 10

MATCH SHEET 18

MATCH SHEET 19

MATCH SHEET 12

16810

WS 569.5

HOUBOLT

WINDSOR LN

LONGFORD

STONEHURST CT

LEGEND

Floodway

100yr Floodplain

500yr Floodplain

Cross Section

TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET 200 0 200 400 600 CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 11 OF 23

MATCH SHEET 11

MATCH SHEET 19

MATCH SHEET 20

MATCH SHEET 5

MATCH SHEET 13

HOUBOLT AVE

INTERSTATE

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
12 OF 23

MATCH SHEET 12

MATCH SHEET 20

MATCH SHEET 5

MATCH SHEET 21

MATCH SHEET 6

MATCH SHEET 14

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

NOTE:
THIS AREA HAS FLOODED
WHEN I&M CANAL BROKE

INTERSTATE

MOUND

MOUND CT

BUSH

RD

C R I & P RR

I & M CANAL

MICHIGAN

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
13 OF 23

MATCH SHEET 13

MATCH SHEET 21

MATCH SHEET 6

MATCH SHEET 22

MATCH SHEET 15

X7900

X5650

X4600

X4375

X3575

X3485

X3956

X10115

ROCK RUN CREEK SOUTH

ROUTE 53

MARYLOU AVE

KARL AVE

DONNA AVE

DEAN AVE

ROCK RUN CREEK SOUTH

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP FURNISHED BY

CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 14 OF 23

MATCH SHEET 14

MATCH SHEET 23

MATCH SHEET

MC CLINTOCK

JOSEPH AVE

DONNA AVE

CARROLL ROUTE

ANDREW

ROCK RUN SOUTH

LIMIT OF STUDY

DES PLAINES RIVER

X2000

X1825

X1650

X1350

X200

W S 507.0

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 3/80

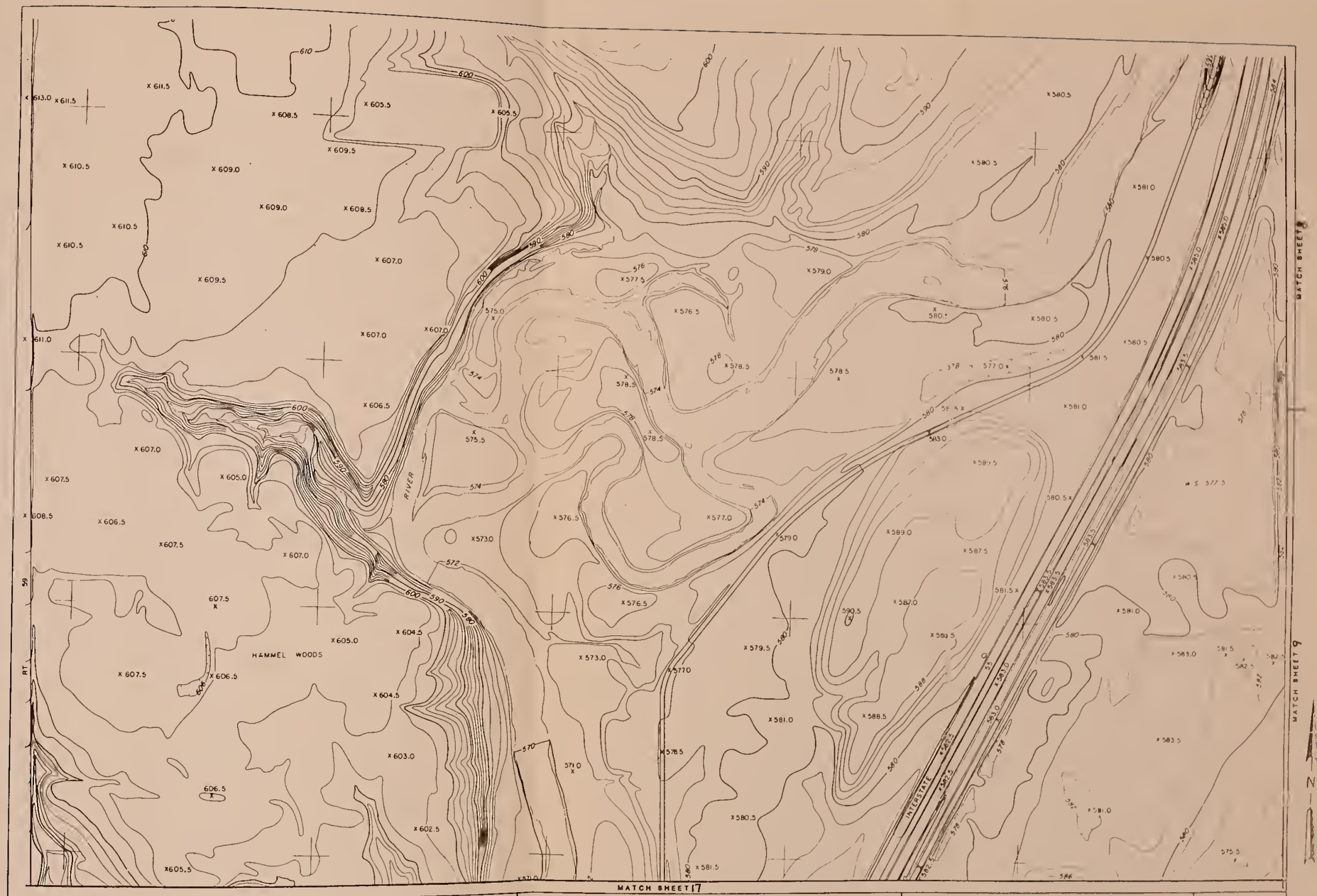
SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
15 OF 23



TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
16 OF 23

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
17 OF 23

MATCH SHEET 17

MATCH SHEET 10

MATCH SHEET 19

MATCH SHEET 11

SARAH AVE

HELENE AVE

LAURA AVE

ILL RT 59

INTERSTATE 55 (US ROUTE 66)

ROCK RUN SLOUGH

ROCK RUN RD

COUNTY FARM RD

LIMIT OF STUDY

13385

13855 RUN

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 18 OF 23

MATCH SHEET 18

MATCH SHEET 11

MATCH SHEET 12

MATCH SHEET 20

12155

9720

LIMIT OF STUDY

ROCK RUN CREEK

RD

(US 66)

JOLIET JUNIOR COLLEGE

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
19 OF 23

MATCH SHEET 19

MATCH SHEET 12

MATCH SHEET 13

MATCH SHEET 21

INTE

ROUTE 66

ROCK RUN

6880

LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

N

TOPOGRAPHIC MAP
FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 9/80

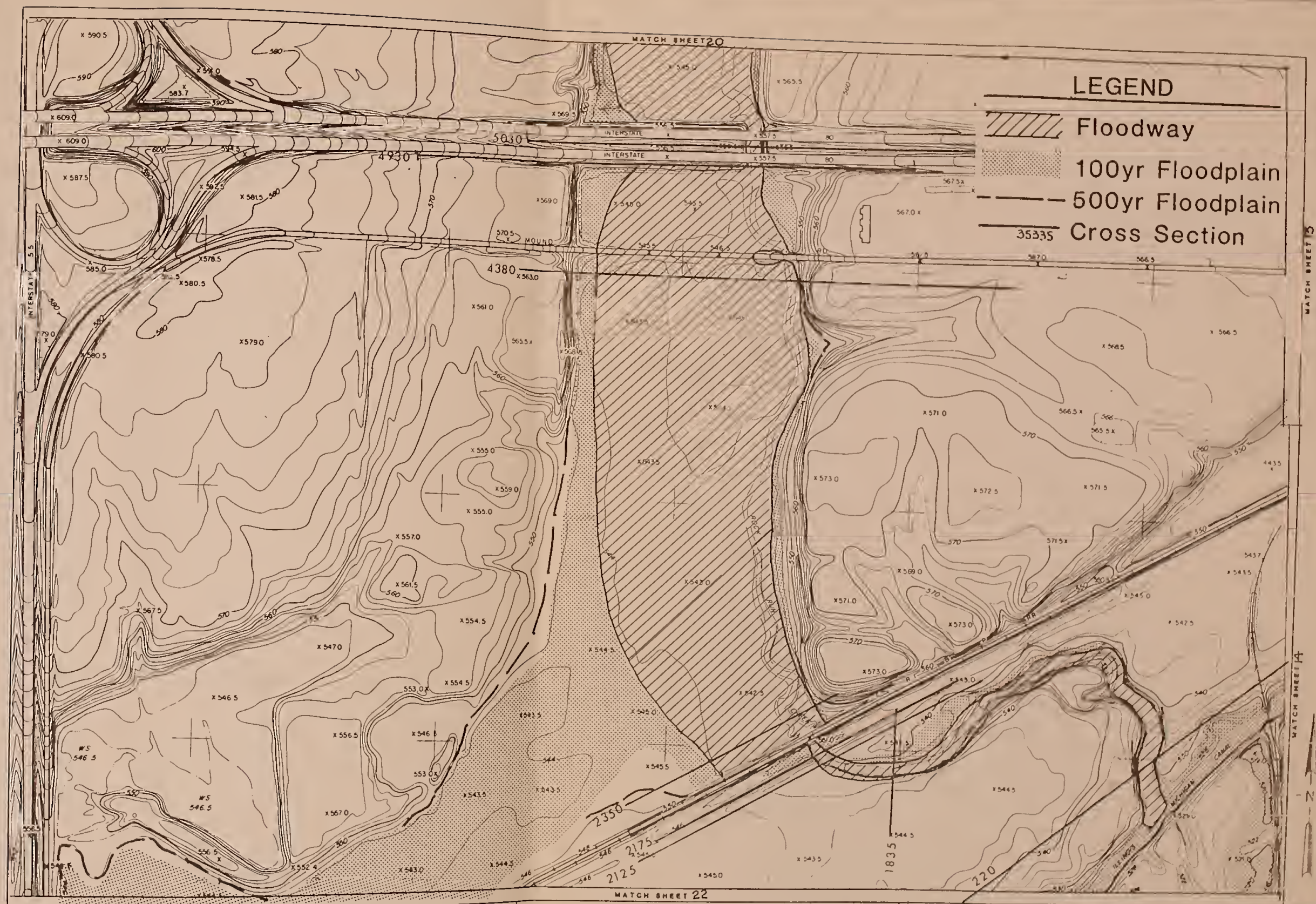
SCALE IN FEET
200 0 200 400 600

CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

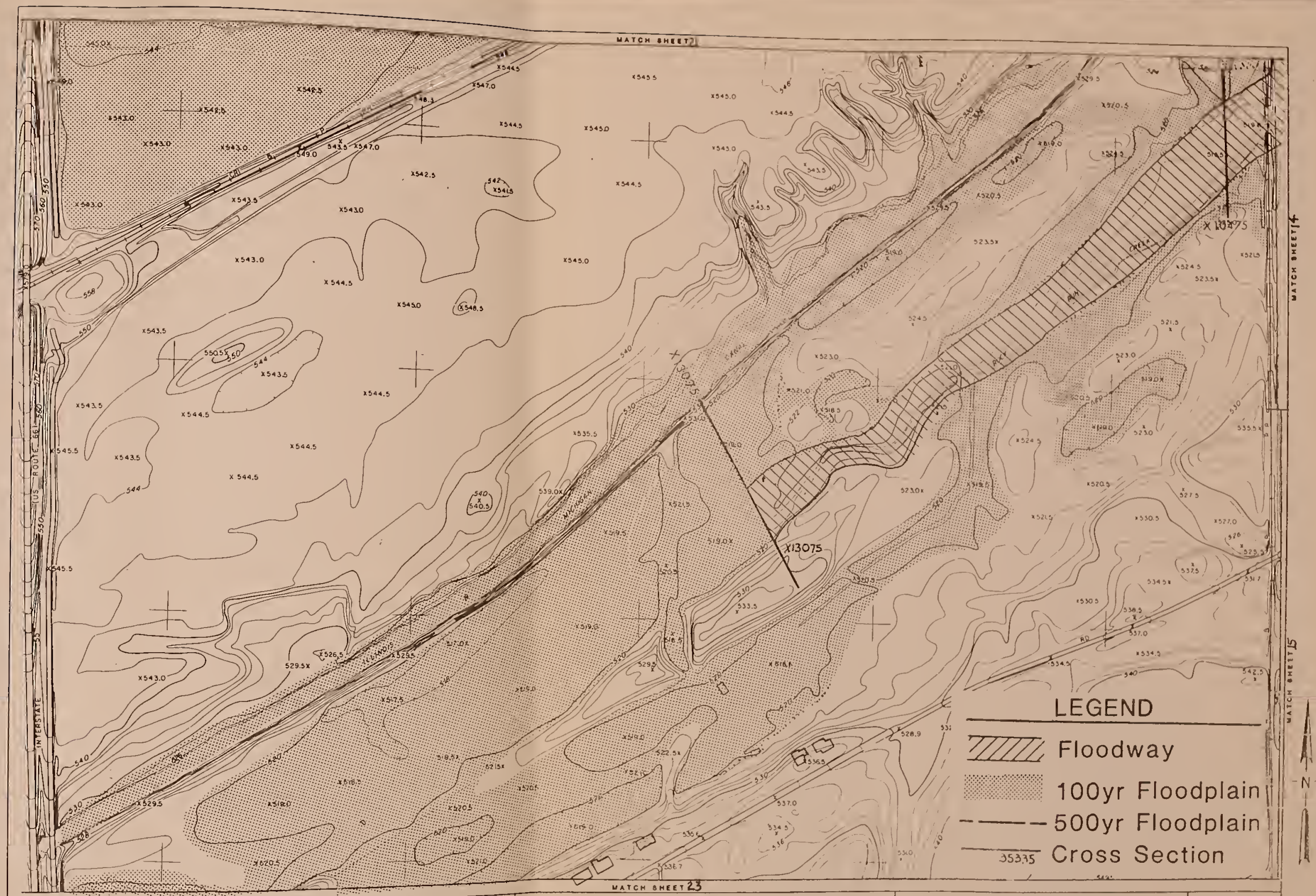
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET
20 OF 23



TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET 200 0 200 400 600 CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 21 OF 23



TOPOGRAPHIC MAP FURNISHED BY
CITY OF JOLIET, ILLINOIS

DATE OF PHOTOGRAPHY: 3/80
DATE OF MAPPING: 3/80

SCALE IN FEET
200 0 200 400 600
CONTOUR INTERVAL 2 FEET
DATUM IS MEAN SEA LEVEL 1929 ADJ

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
IN COOPERATION WITH
ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF WATER RESOURCES

FLOODPLAIN MAP
LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
WILL COUNTY, ILLINOIS

SHEET 22 OF 23

MATCH SHEET 22

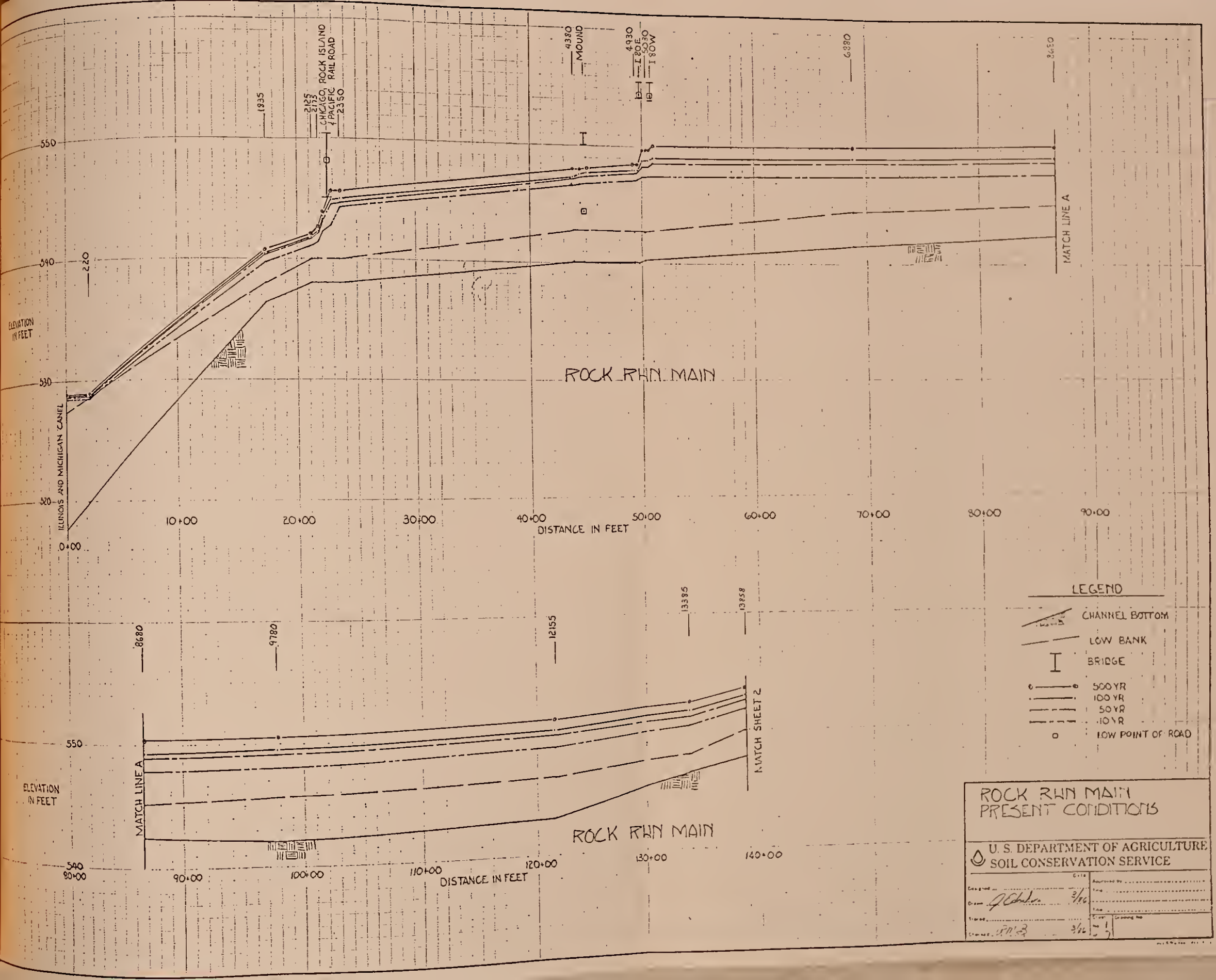
MATCH SHEET 15

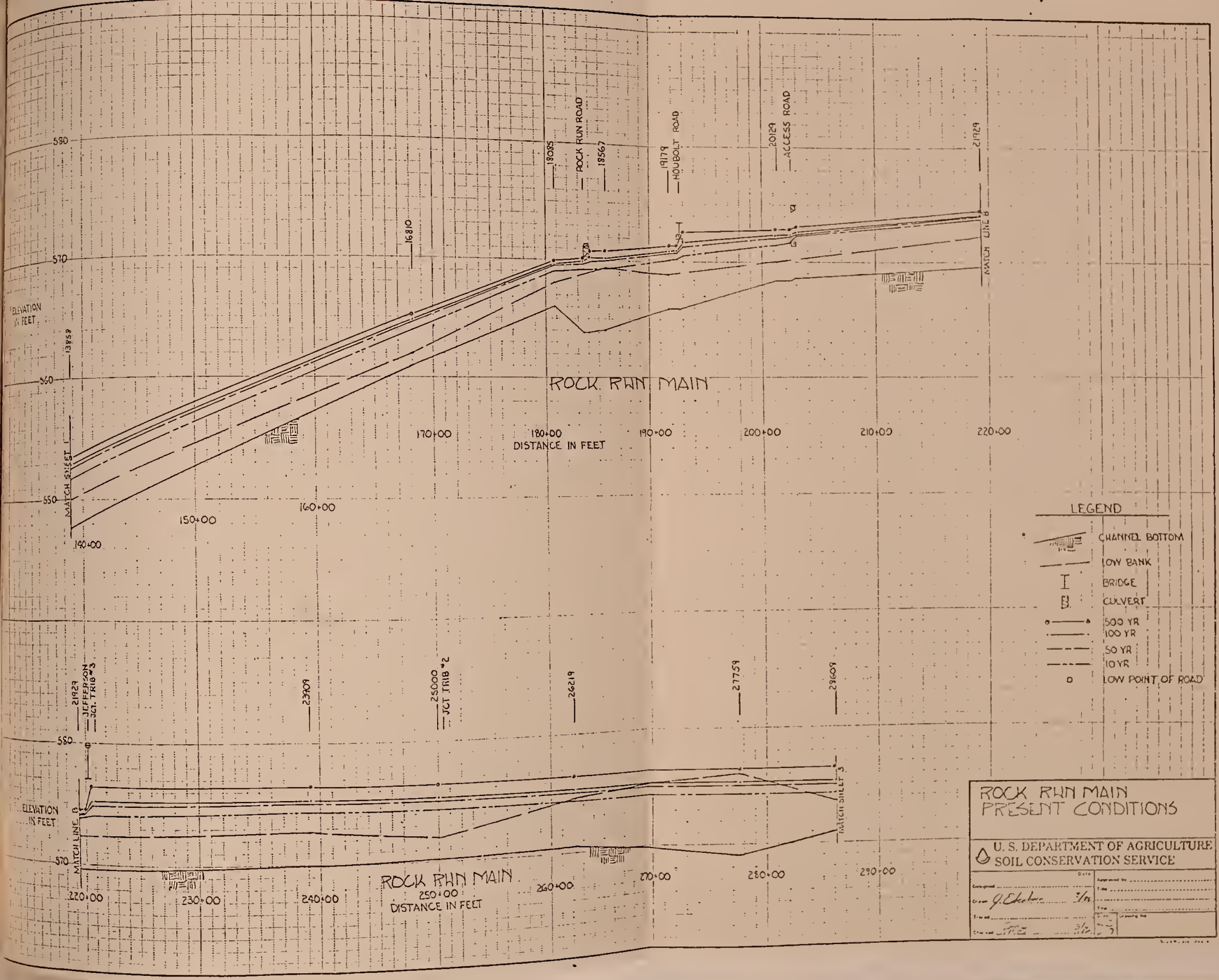
LEGEND

- Floodway
- 100yr Floodplain
- 500yr Floodplain
- 35335 Cross Section

TOPOGRAPHIC MAP FURNISHED BY CITY OF JOLIET, ILLINOIS	DATE OF PHOTOGRAPHY: 3/80 DATE OF MAPPING: 9/80 SCALE IN FEET CONTOUR INTERVAL 2 FEET DATUM IS MEAN SEA LEVEL 1929 ADJ	U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE IN COOPERATION WITH ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF WATER RESOURCES	FLOODPLAIN MAP LOWER ROCK RUN FLOODPLAIN MANAGEMENT STUDY WILL COUNTY, ILLINOIS	SHEET 23 OF 23

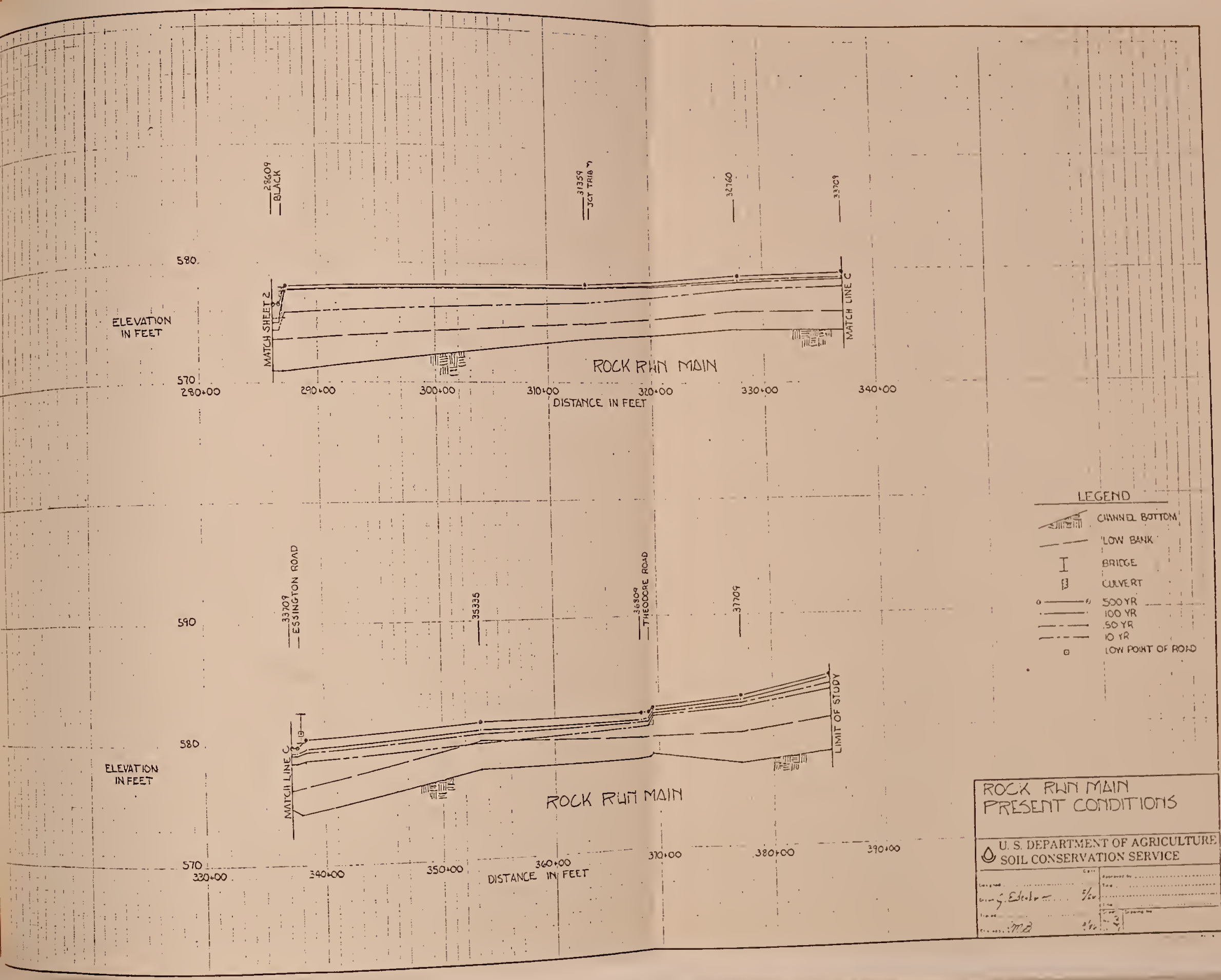
APPENDIX A
FLOOD PROFILES

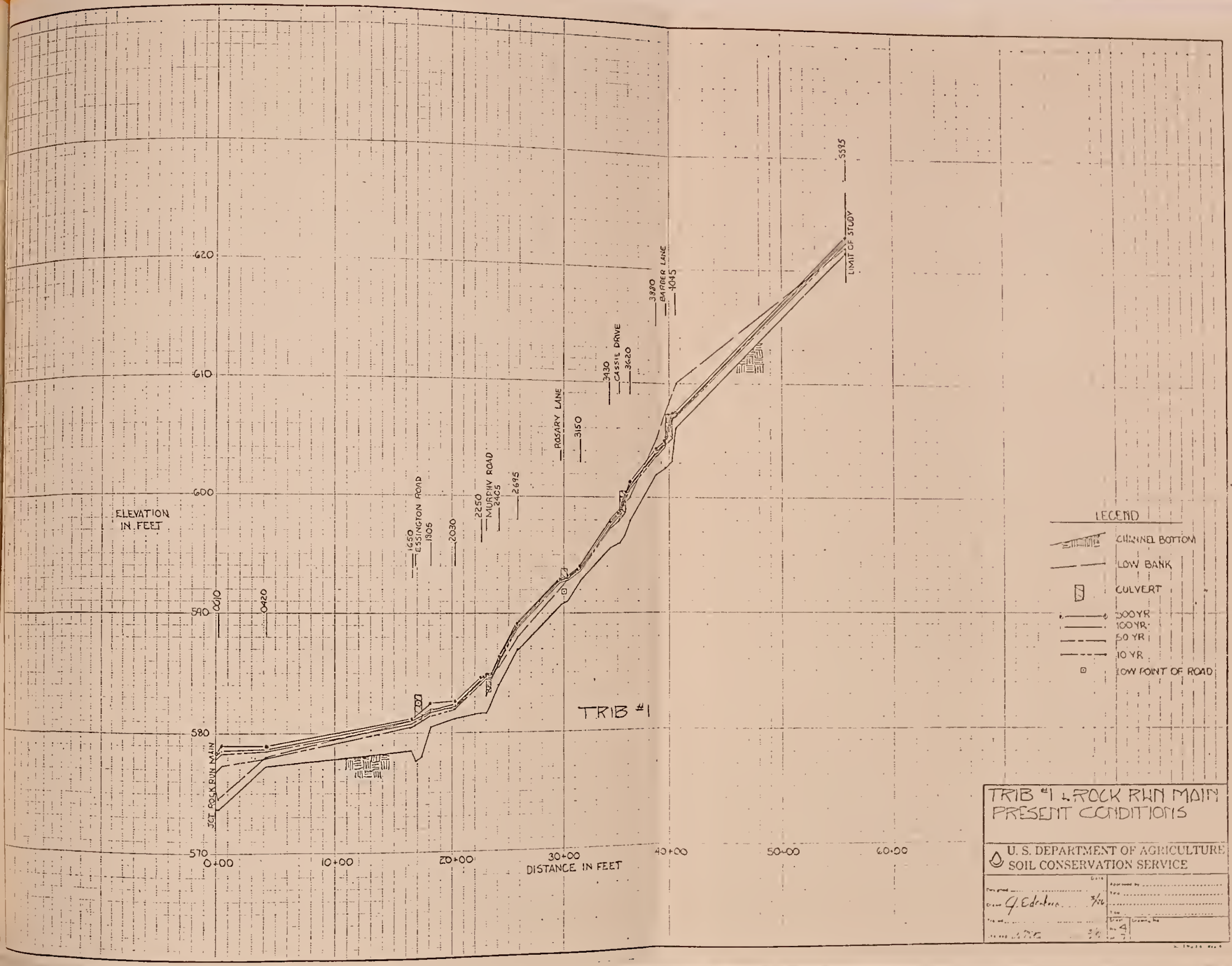

ROCK RUN MAIN
ELEVATION IN FEET
550
540
530
520
220
1935
2125
2175
CHICAGO, ROCK ISLAND & PACIFIC RAIL ROAD
2350
4380
MOUND
4930
180E
5030
180W
6380
6830
MATCH LINE A
ILLINOIS AND MICHIGAN CANEL
10+00
20+00
30+00
40+00
50+00
60+00
70+00
80+00
90+00
0+00
DISTANCE IN FEET
8680
9780
12155
13385
13858
MATCH LINE A
MATCH SHEET 2
ROCK RUN MAIN
ELEVATION IN FEET
550
540
80+00
90+00
100+00
110+00
120+00
130+00
140+00
DISTANCE IN FEET
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
ROCK RUN MAIN
PRESENT CONDITIONS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
3/66
3/66



ROCK RUN MAIN
PRESENT CONDITIONS

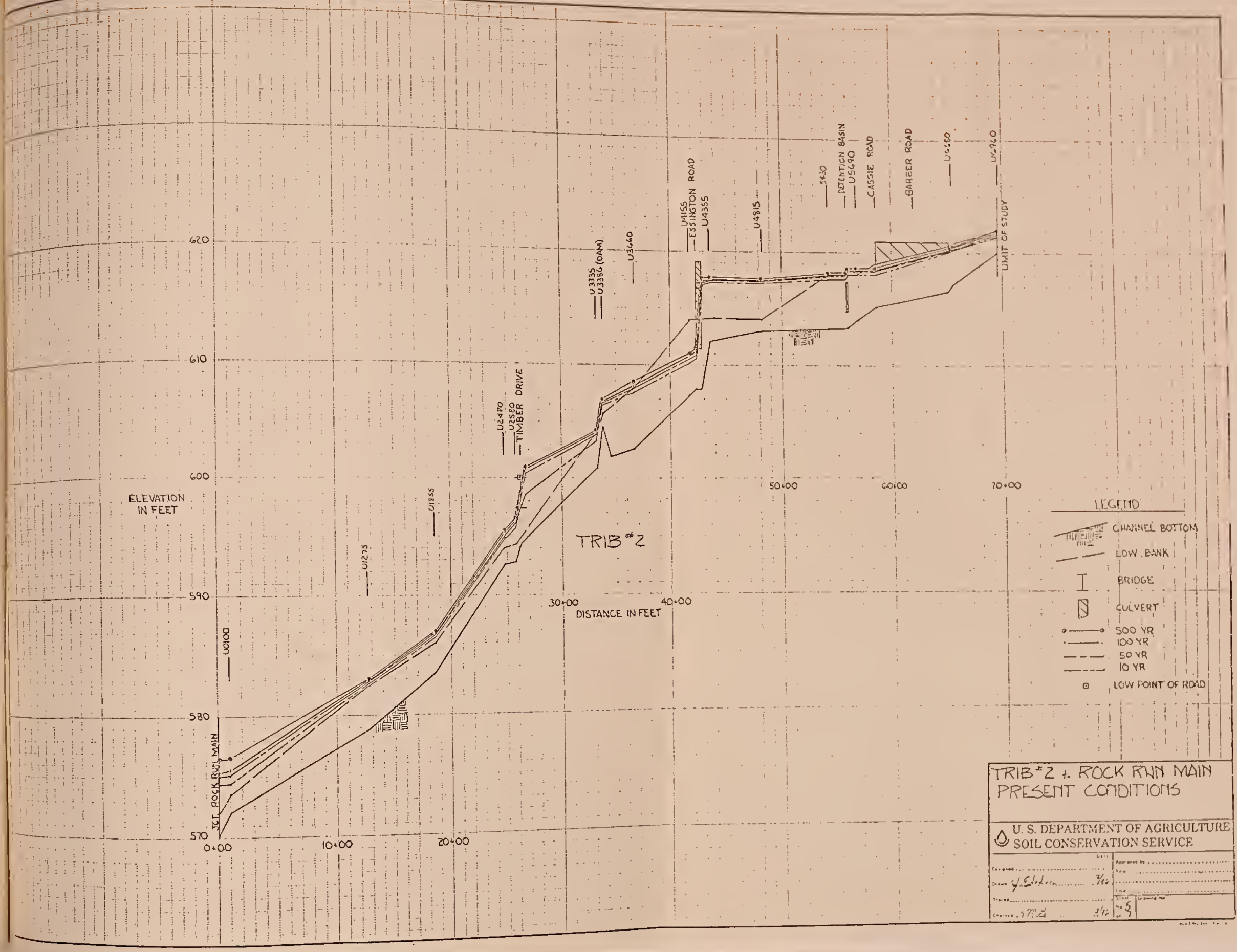
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE


28609
BLACK
31359
JCT TRIB "Y"
32760
33709
580
ELEVATION
IN FEET
570
MATCH SHEET 2
MATCH LINE C
ROCK RUN MAIN
280+00
290+00
300+00
310+00
320+00
330+00
340+00
DISTANCE IN FEET
33709
ESSINGTON ROAD
35335
36909
THEODORE ROAD
37709
590
580
ELEVATION
IN FEET
570
MATCH LINE C
LIMIT OF STUDY
ROCK RUN MAIN
330+00
340+00
350+00
360+00
370+00
380+00
390+00
DISTANCE IN FEET
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
ROCK RUN MAIN
PRESENT CONDITIONS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



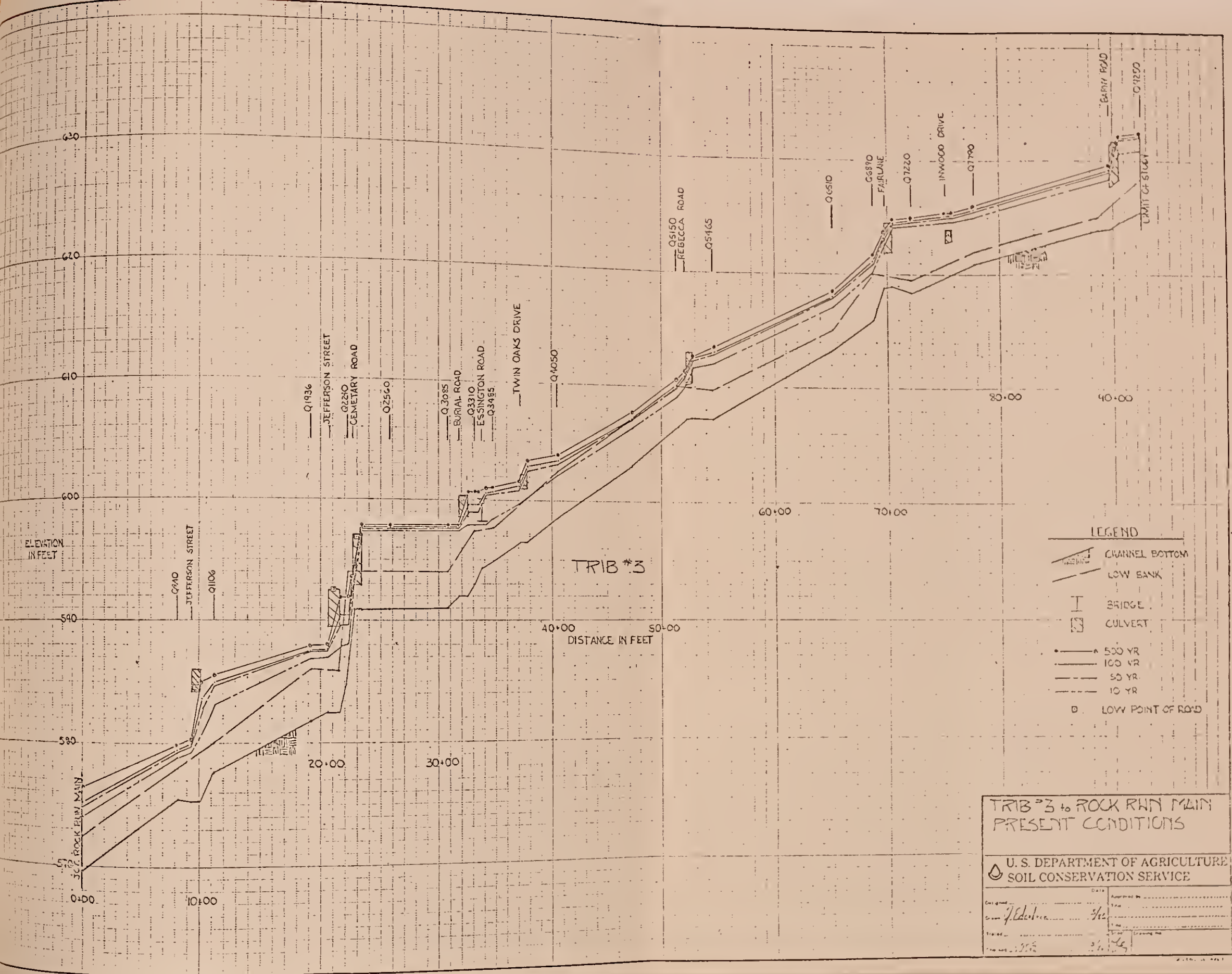
TRIB #1 & ROCK RUN MAIN
PRESENT CONDITIONS

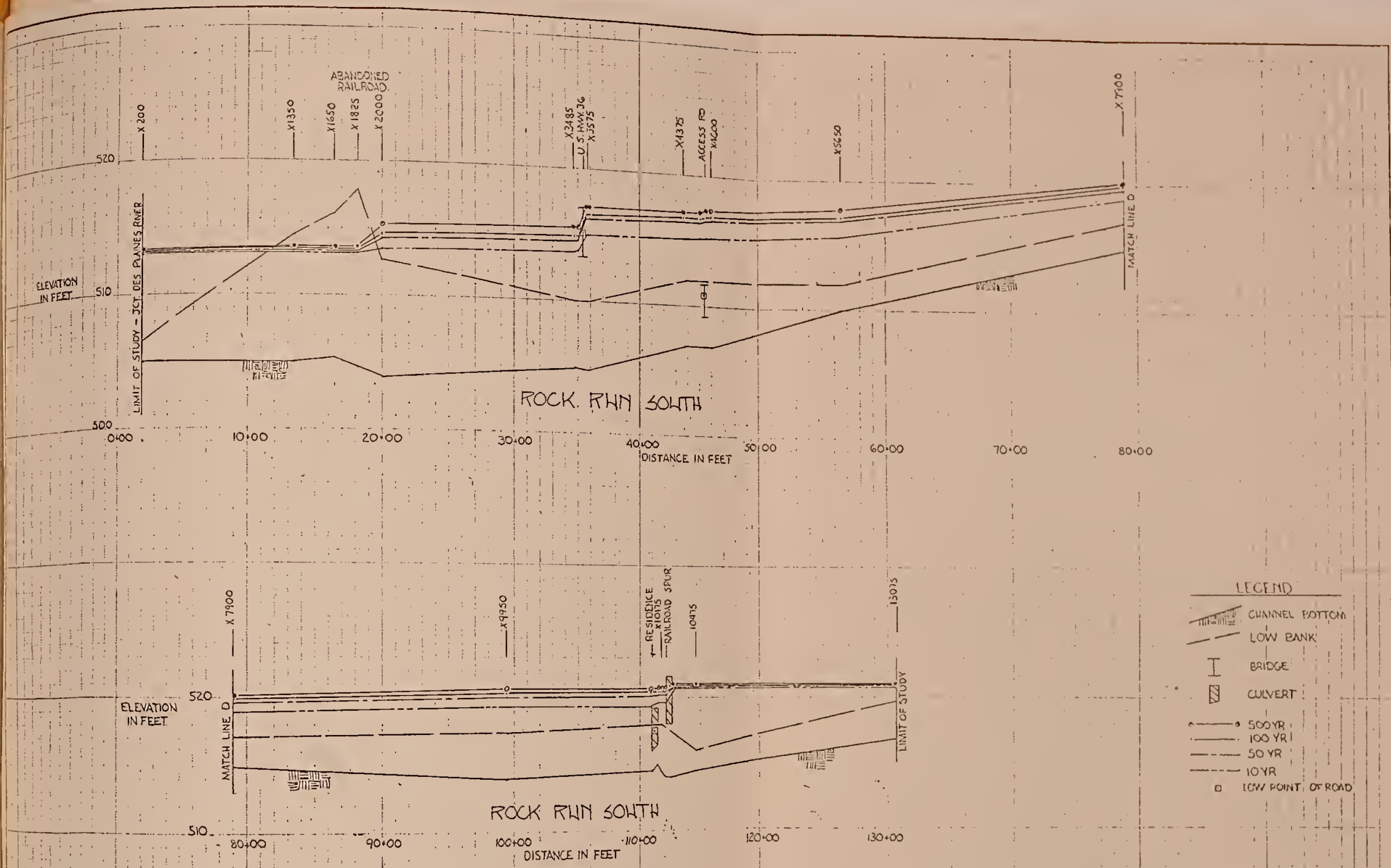
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



TRIB #2 & ROCK RUN MAIN
PRESENT CONDITIONS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

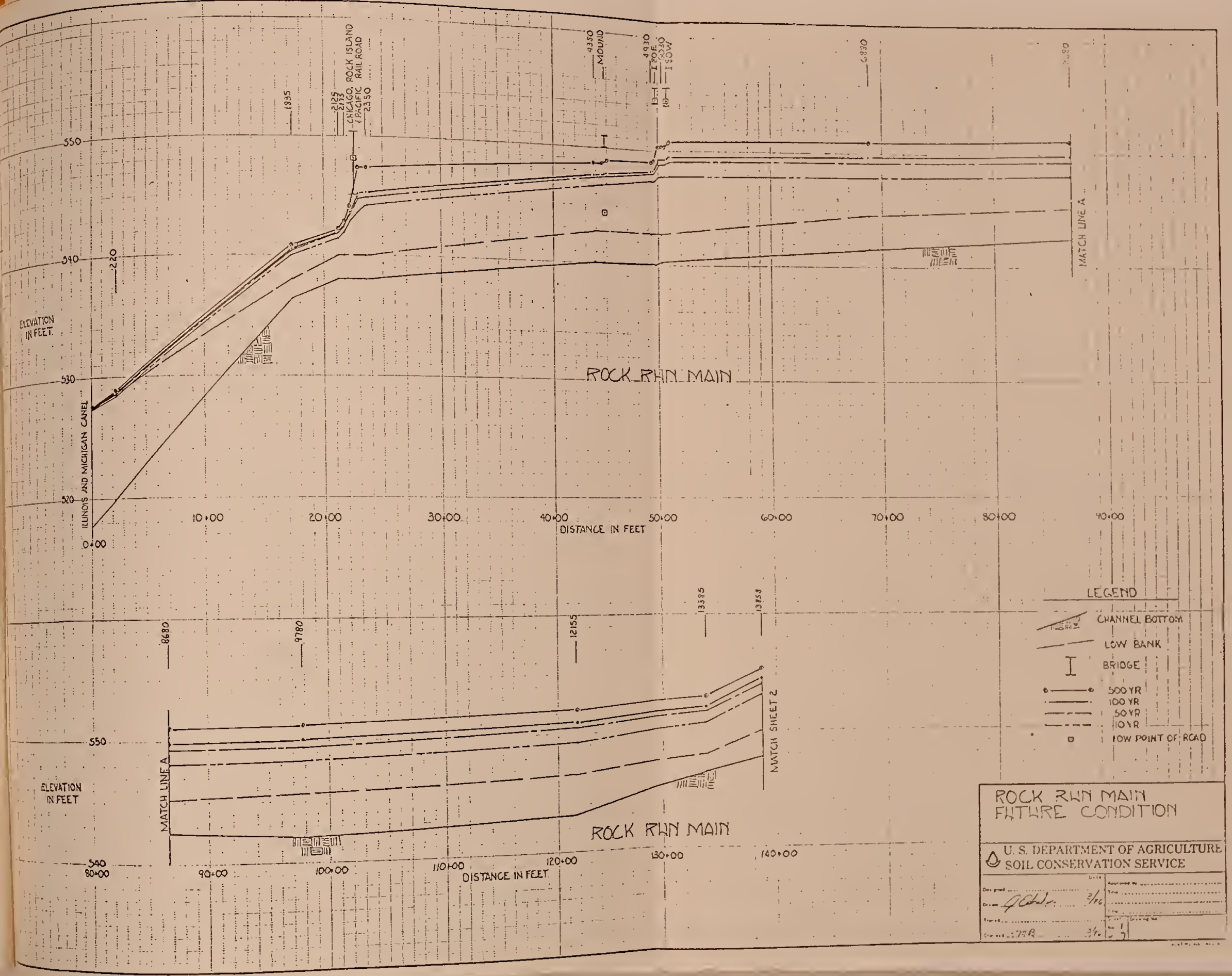

ELEVATION IN FEET
620
610
600
590
580
570
0+00
10+00
20+00
30+00
40+00
50+00
60+00
70+00
80+00
90+00
DISTANCE IN FEET
TRIB #3
Q1936
JEFFERSON STREET
Q2240
CEMETARY ROAD
Q2560
Q3085
BURIAL ROAD
Q3310
ESSINGTON ROAD
Q3495
TWIN OAKS DRIVE
Q4050
Q5150
REBECCA ROAD
Q5465
Q6510
Q6890
FAIRLANE
Q7220
INWOOD DRIVE
Q7700
BARRY ROAD
Q9250
LIMIT OF STUDY
Q440
JEFFERSON STREET
Q1106
TRIB #3 TO ROCK RUN MAIN
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
TRIB #3 to ROCK RUN MAIN
PRESENT CONDITIONS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



ROCK RUN SOUTH
PRESENT CONDITIONS

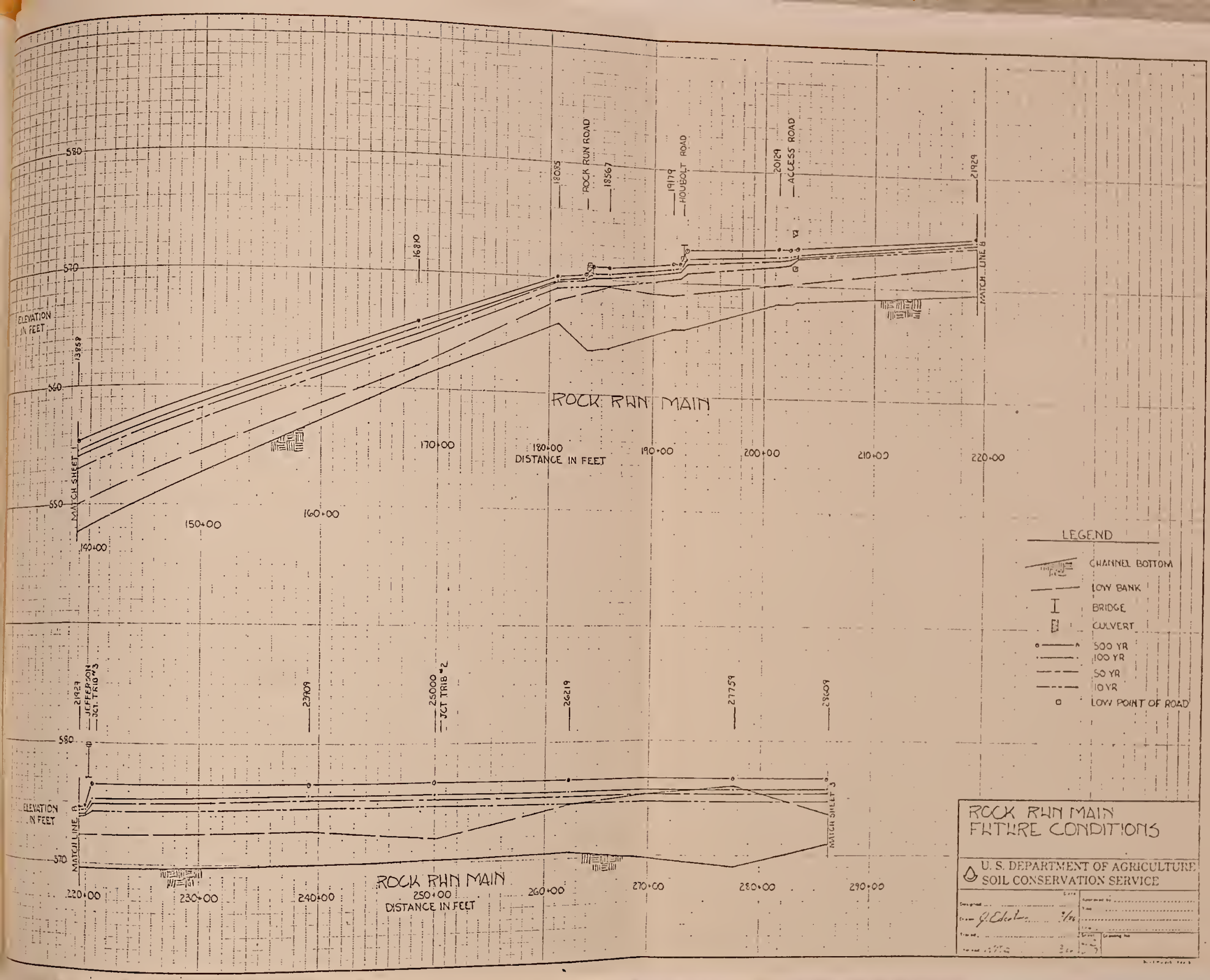
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

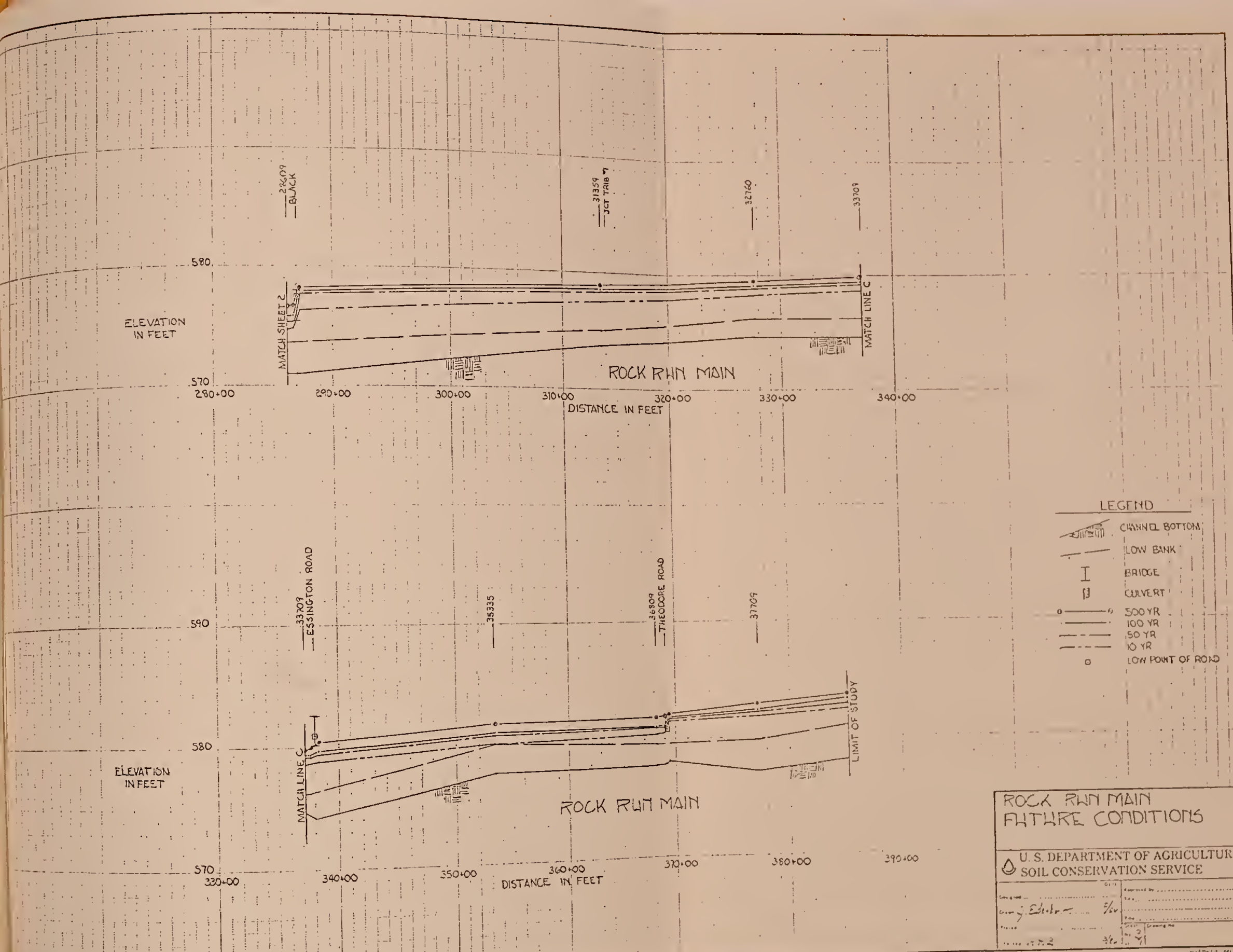
Designed G. Edelson 3/56
Approved by
Title
Drawn
Checked
Date
Sheet No. 7

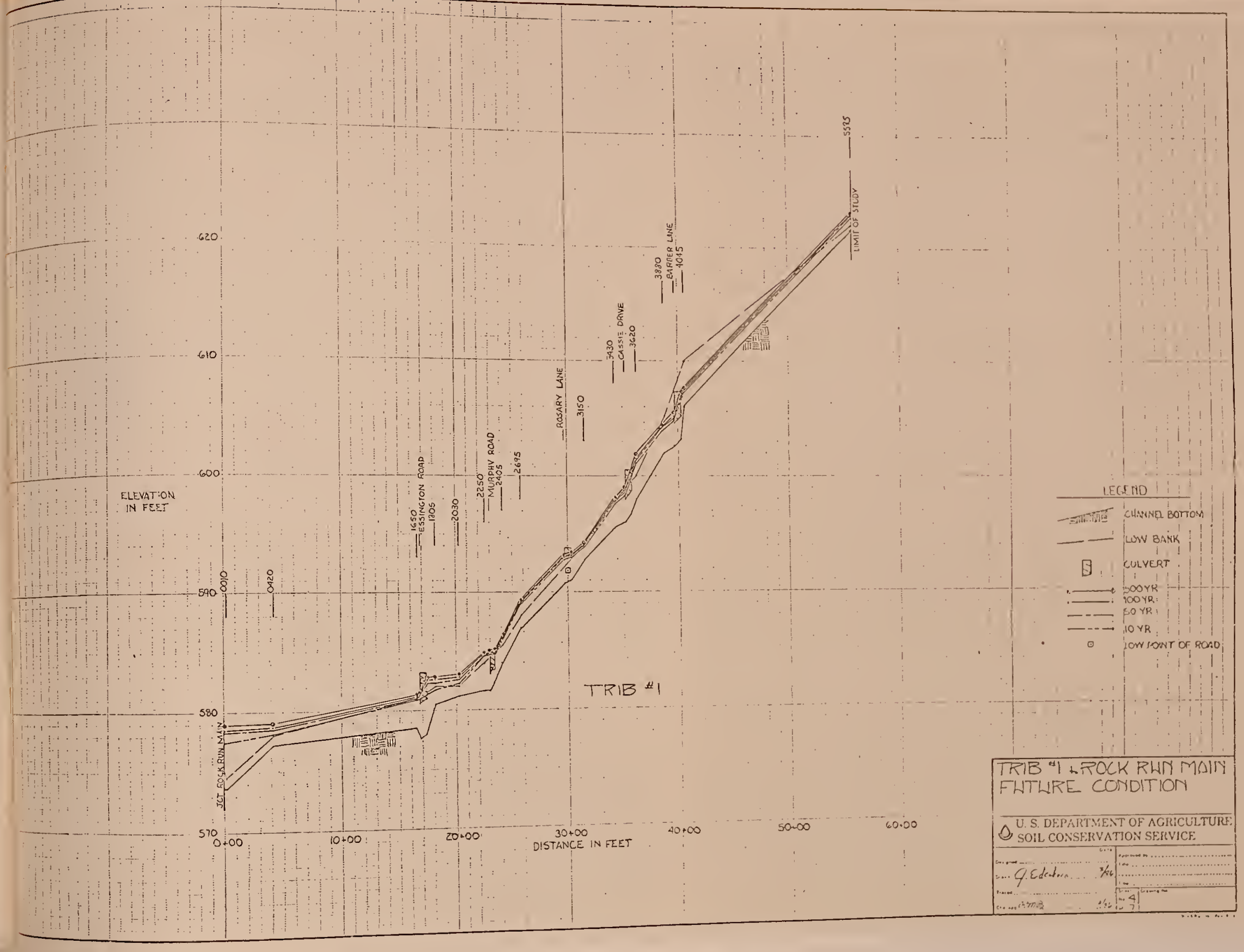


ROCK RHN MAIN
FUTURE CONDITION

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE


580
570
560
550
ELEVATION IN FEET
MATCH SHEET 1
13859
16880
18085
ROCK RUN ROAD
18567
19179
HOUBOLT ROAD
20129
ACCESS ROAD
21929
MATCH LINE B
ROCK RUN MAIN
150+00
160+00
170+00
180+00
190+00
200+00
210+00
220+00
DISTANCE IN FEET
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
21929
JEFFERSON
JCT. TRIB "3
23909
25000
JCT TRIB "2
26219
27759
28609
MATCH SHEET 3
MATCH LINE B
220+00
230+00
240+00
250+00
260+00
270+00
280+00
290+00
ROCK RUN MAIN
DISTANCE IN FEET
ROCK RUN MAIN
FUTURE CONDITIONS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE


28609
BLACK
31359
JCT TRIB "7"
32760
33709
580
ELEVATION IN FEET
MATCH SHEET 2
MATCH LINE C
570
280+00
290+00
300+00
310+00
320+00
330+00
340+00
DISTANCE IN FEET
ROCK RUN MAIN
33709
ESSINGTON ROAD
35335
36809
THEODORE ROAD
37709
590
580
570
MATCH LINE C
LIMIT OF STUDY
330+00
340+00
350+00
360+00
370+00
380+00
390+00
DISTANCE IN FEET
ROCK RUN MAIN
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
ROCK RUN MAIN
FUTURE CONDITIONS
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



TRIB #1 & ROCK RUN MAIN
FUTURE CONDITION

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

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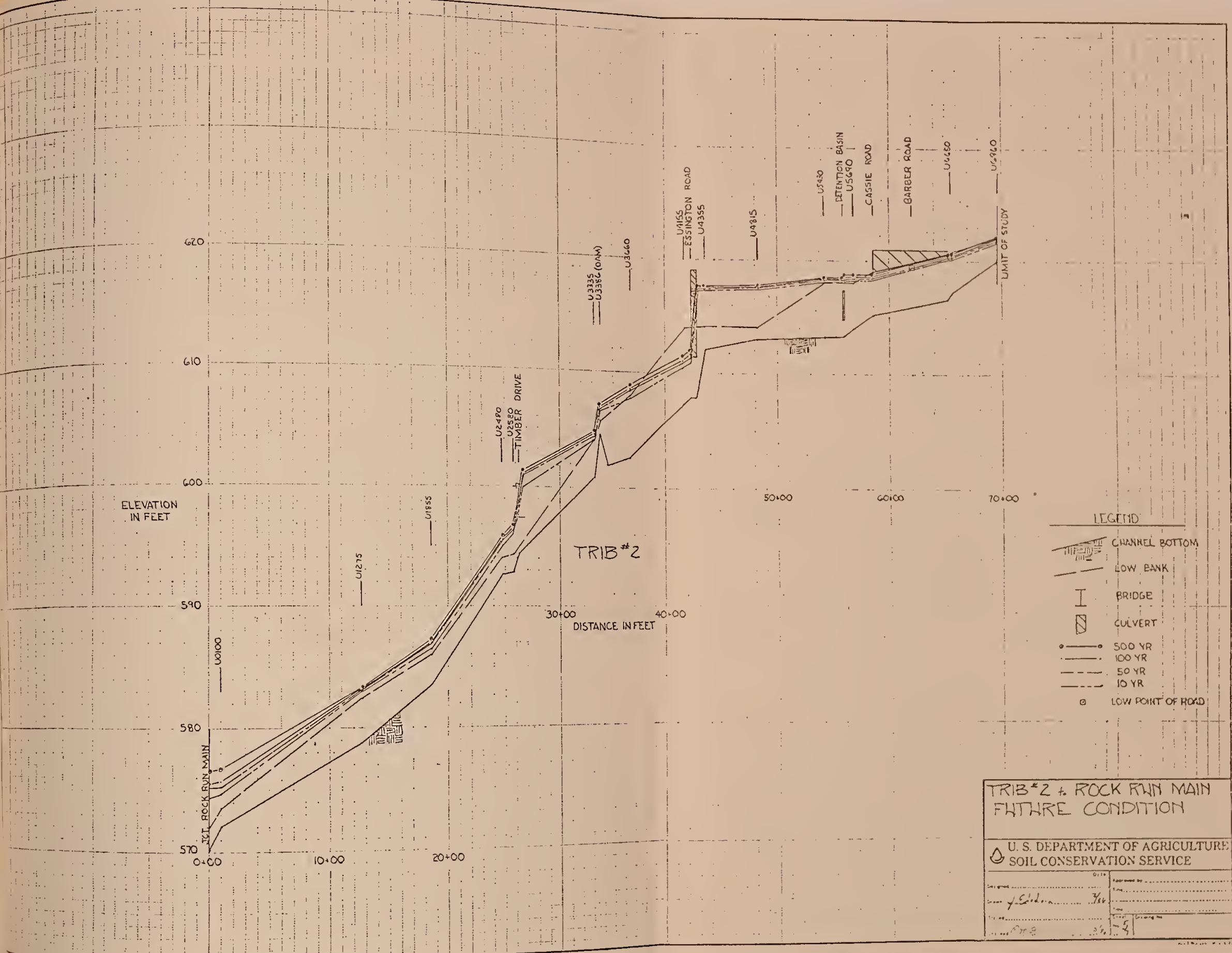
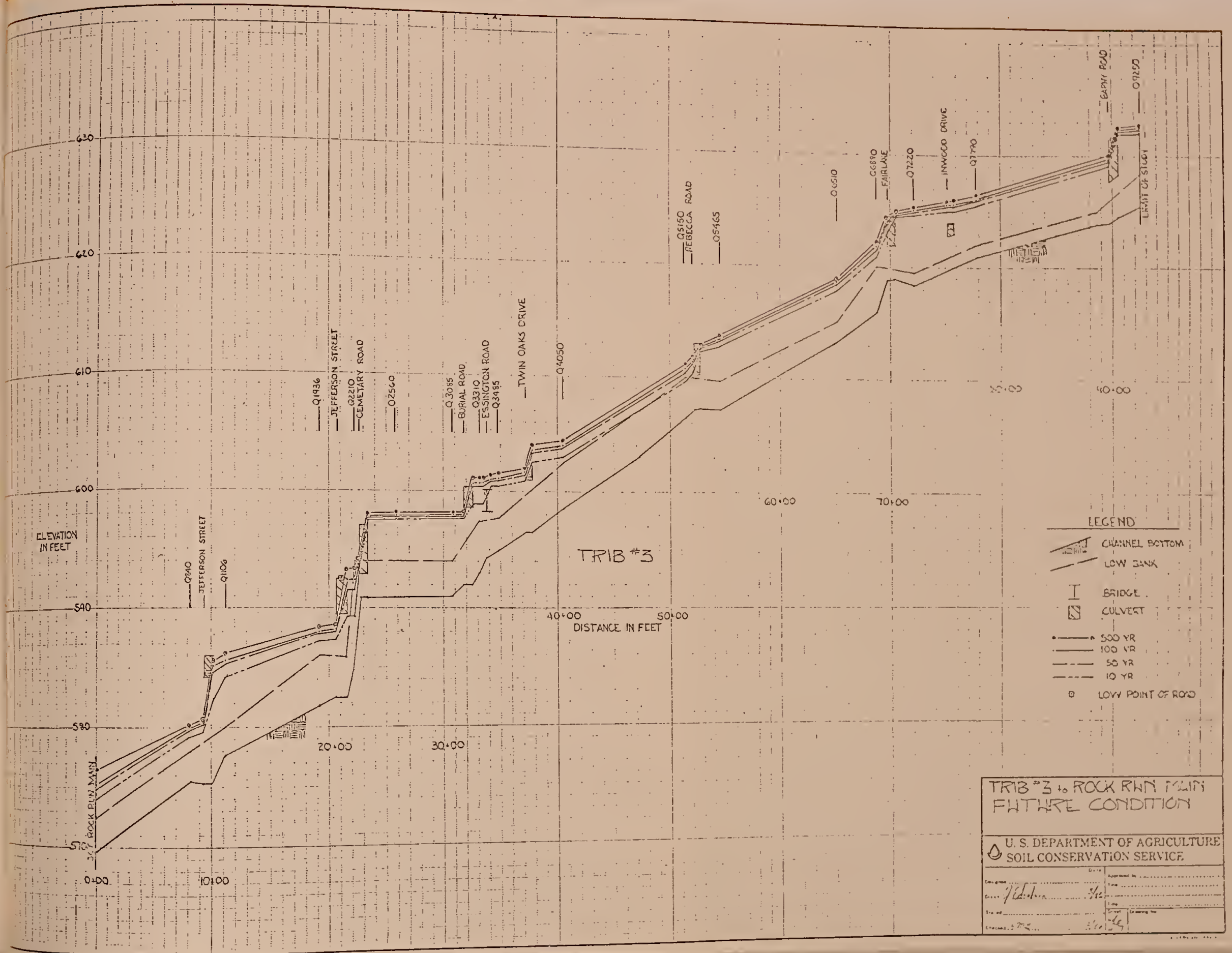
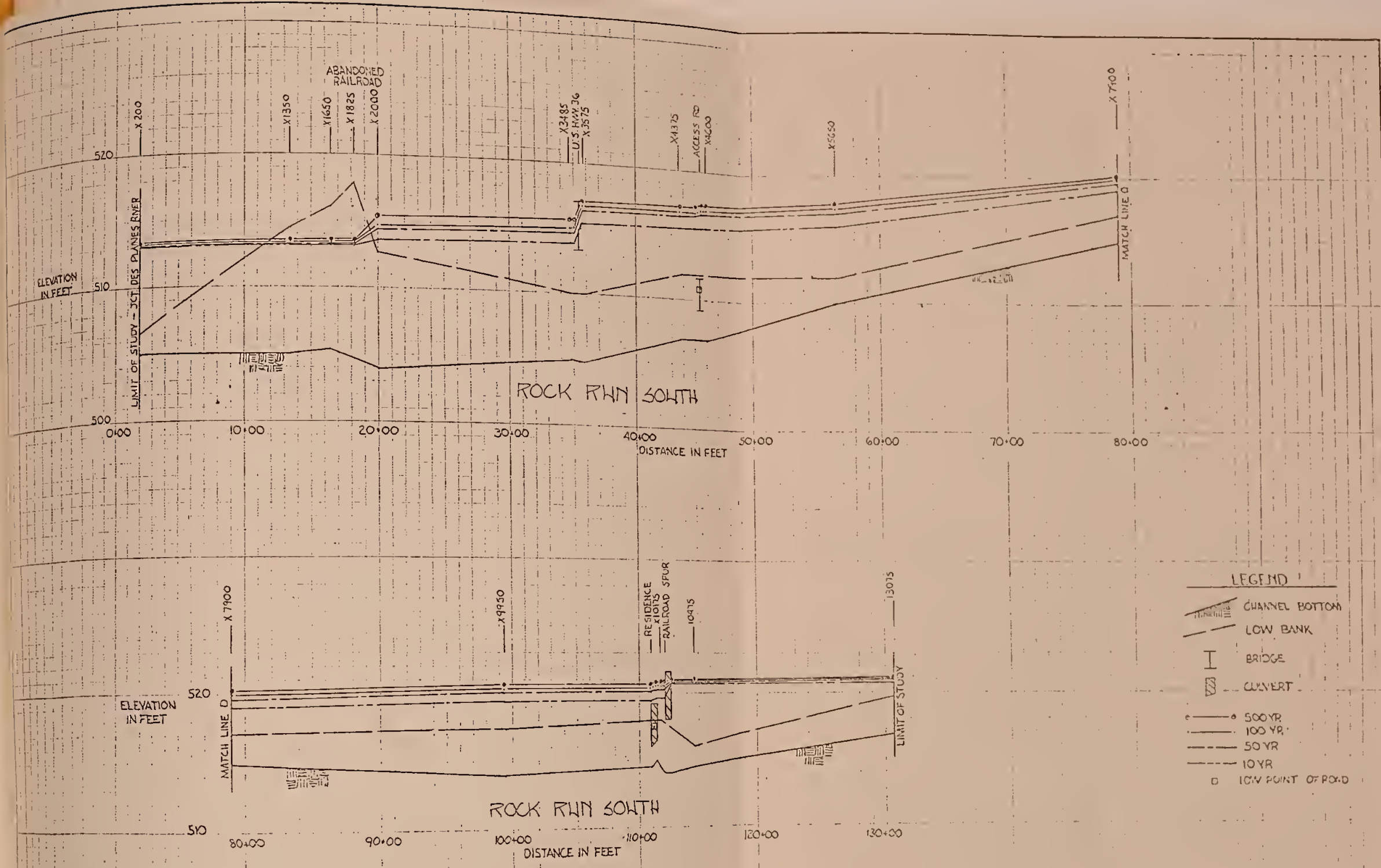
Traced
Checked 4/66
Sheet No. 4

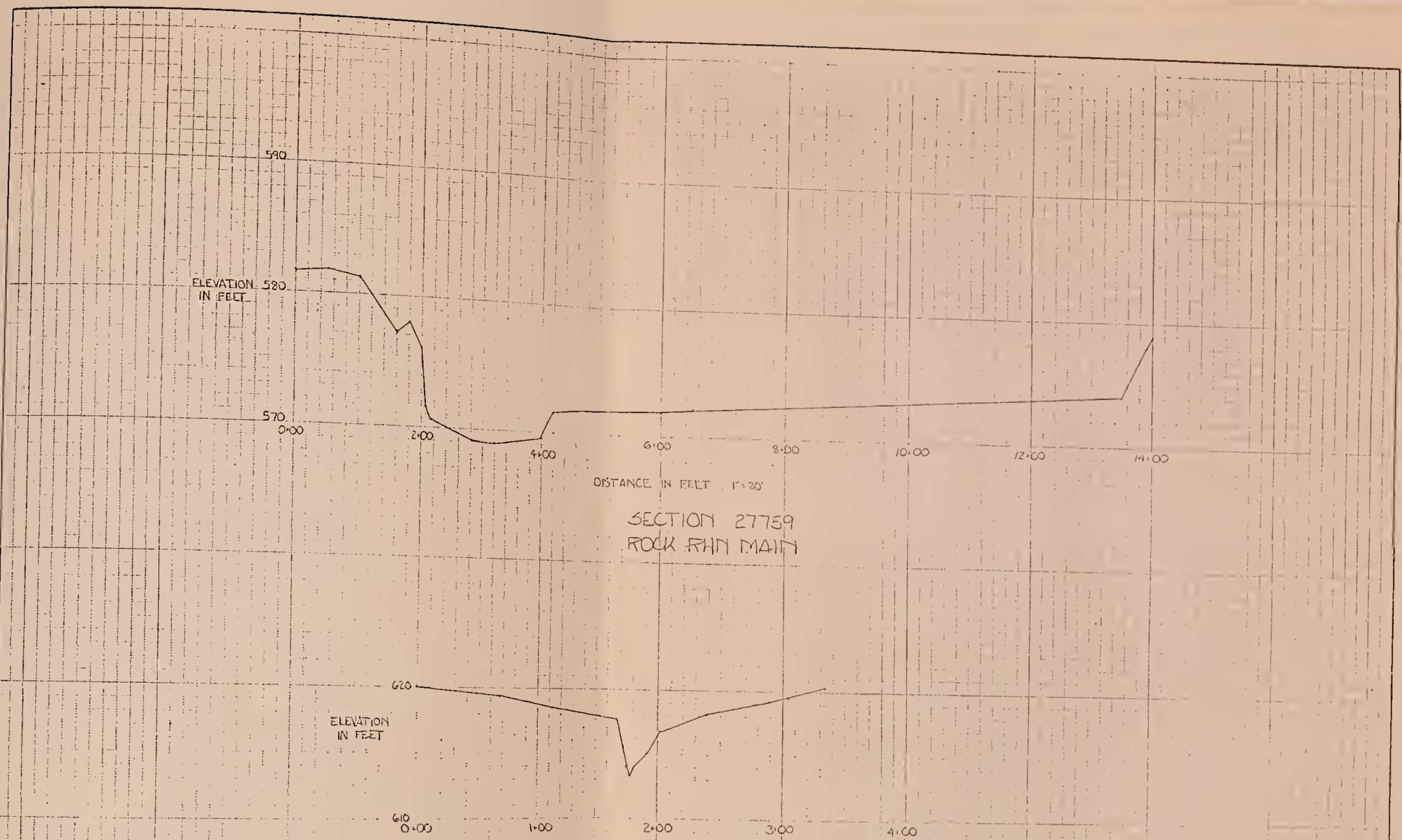

620
610
600
590
580
570
ELEVATION IN FEET
U2490
U2580
TIMBER DRIVE
U3335
U3386 (OAM)
U3660
U4155
ESSINGTON ROAD
U4355
U4815
U5430
DETENTION BASIN
U5490
CASSIE ROAD
BARBER ROAD
U6260
U6960
LIMIT OF STUDY
U1855
U1275
U0100
JCT. ROCK RUN MAIN
TRIB #2
0+00
10+00
20+00
30+00
40+00
50+00
60+00
70+00
DISTANCE IN FEET
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
TRIB #2 & ROCK RUN MAIN
FUTURE CONDITION
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE


ELEVATION IN FEET
630
620
610
600
590
580
570
Q1936
JEFFERSON STREET
Q2210
CEMETARY ROAD
Q2560
Q3095
BURIAL ROAD
Q3310
ESSINGTON ROAD
Q3495
TWIN OAKS DRIVE
Q4050
Q5150
REBECCA ROAD
Q5465
Q6510
Q6890
FAIRLANE
Q7220
INWOOD DRIVE
Q7710
BARRY ROAD
Q8250
LIMIT OF STUDY
Q940
JEFFERSON STREET
Q1108
ROCK RUN MAIN
0+00
10+00
20+00
30+00
40+00
50+00
60+00
70+00
80+00
90+00
DISTANCE IN FEET
TRIB #3
LEGEND
CHANNEL BOTTOM
LOW BANK
BRIDGE
CULVERT
500 YR
100 YR
50 YR
10 YR
LOW POINT OF ROAD
TRIB #3 to ROCK RUN MAIN
FUTURE CONDITION
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



ROCK RUN SOUTH
FUTURE CONDITIONS

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE



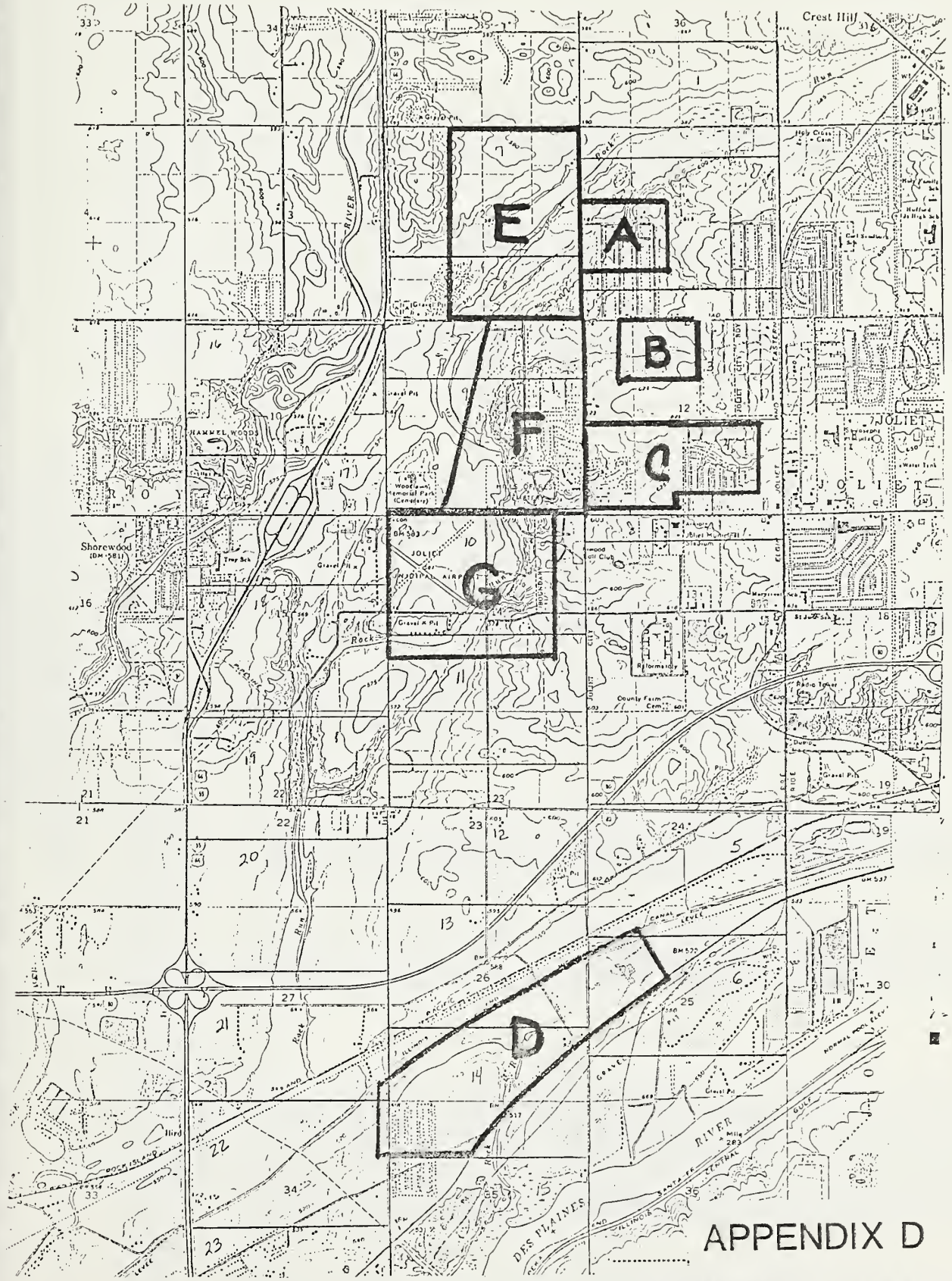
SECTION 27759
ROCK RUN MAIN

SECTION Q6510
TRIB #3

TYPICAL SECTION
LOWER ROCK RUN

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed J. Eberhart 4/83
Drawn
Traced
Checked
Date
Approved
Title
Date
Sheet No. 1
Drawing No. APPENDIX F



APPENDIX D

BUILDING CLUSTER LOCATION MAP

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Eval No.	Identification Street Address (Description)	Building Elevation First Floor	Low Water Entry	Present Conditions 10% Chance	1% Chance	0.2% Chance	Future Conditions 10% Chance	1% Chance	0.2% Chance
A1	1113 Murphy	586.5	586.6	583.6	584.0	584.1	583.6	584.4	584.6
A1A	1113 Murphy	585.6	585.7	583.6	584.0	584.1	583.6	584.4	584.6
A2	1109 Murphy	587.5	587.6	583.6	584.0	584.1	583.6	584.4	584.6
A2A	1109 Murphy	586.7	586.8	583.6	584.0	584.1	583.6	584.4	584.6
A3	1111 Murphy	589.6	589.7	585.6	586.4	586.6	585.7	586.6	586.7
A3A	1111 Murphy	588.7	588.8	585.6	586.4	586.6	585.7	586.6	586.7
A4	1116 Murphy	587.0	587.1	585.6	586.4	586.6	585.7	586.6	586.7
A4A	1116 Murphy	586.1	586.2	585.6	586.4	586.6	586.3	586.5	586.6
A5	3514 Ingalls	587.0	587.1	586.1	586.4	586.6	586.2	586.6	586.7
A5A	3514 Ingalls	586.0	586.1	586.1	586.4	586.6	586.4	586.6	586.7
A6	3500 Ingalls	590.6	590.7	588.0	588.3	588.6	588.2	588.6	588.7
A6A	3500 Ingalls	589.7	589.8	588.0	588.3	588.6	588.2	588.6	588.7
A7	1117 Rosary	593.3	593.4	589.8	590.1	590.2	590.1	590.5	590.6
A7A	1117 Rosary	592.3	592.4	589.8	590.1	590.2	590.1	590.5	590.6
A8	1113 Rosary	593.9	594.0	590.6	590.9	591.0	590.8	591.7	591.8
A8A	1113 Rosary	593.0	593.1	590.6	590.9	591.0	590.8	591.7	591.8
A9	1109 Rosary	595.6	595.7	591.0	591.4	592.4	591.6	592.3	592.4
A9A	1109 Rosary	594.5	594.6	591.0	591.4	592.4	591.6	592.3	592.4
A10	1108 Rosary	596.5	596.6	592.0	592.5	592.6	593.0	593.5	593.6
A10A	1108 Rosary	595.6	595.7	592.0	592.5	592.6	593.0	593.5	593.6
A11	1112 Rosary	594.7	594.8	591.0	591.3	591.4	591.6	592.3	592.4

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
A12	1116	Rosary	594.0	594.1	589.8	590.1	590.2	590.1	590.5	590.6
A12A	1116	Rosary	593.0	593.1	589.8	590.1	590.2	590.1	590.5	590.6
A13	3414	Ingalls	592.5	592.6	589.4	589.9	590.0	589.5	589.9	590.0
A14	1113	Cassie	599.4	599.5	597.8	598.3	599.4	598.0	598.7	598.9
A14A	1113	Cassie	598.4	598.5	597.8	598.3	599.4	598.0	598.7	598.9
A15	1109	Cassie	600.9	601.0	597.8	598.3	599.4	598.0	598.7	598.9
A16	1100	Cassie	603.1	603.2	598.6	599.8	599.8	598.6	600.4	600.6
A16A	1100	Cassie	602.1	602.2	598.6	599.8	599.8	598.6	600.4	600.6
A17	1114	Cassie	604.2	604.3	598.6	599.8	599.8	598.6	600.4	600.6
A17A	1114	Cassie	603.2	603.3	598.6	599.8	599.8	598.6	600.4	600.6
B8	703	Cassie	620.7	620.8	618.0	618.4	618.6	618.3	618.6	618.8
B9	675	Cassie	621.1	621.2	618.0	618.5	618.6	618.3	618.3	618.8
B10	667	Cassie	620.0	620.1	618.0	618.5	618.6	618.4	618.9	619.1
B11	661	Cassie	620.5	620.6	619.0	619.6	619.8	618.4	619.0	619.2
B11A	661	Cassie	619.8	619.9	619.0	619.6	619.8	618.4	619.0	619.2
B12	655	Cassie	621.4	621.5	619.0	619.6	619.8	618.5	619.0	619.2
B13	647	Cassie	622.0	622.1	618.0	618.4	618.6	618.6	619.0	619.2
B14	2963	Avolon	621.3	621.4	618.0	618.4	618.7	618.4	618.6	618.8
B14A	2963	Avolon	620.5	620.6	618.0	618.4	618.7	618.4	618.6	618.8
B15	2955	Avolon	621.5	620.0	618.0	618.4	618.7	618.4	618.6	618.8
B16	2949	Avolon	621.1	620.5	618.0	618.4	618.6	618.4	618.6	618.8

LOWER ROCK RUN
FLOODPLAIN MANAGEMENT STUDY
BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
B17	2943	Avolon	621.3	621.4	618.0	618.4	618.6	618.3	618.7	618.9
B17A	2943	Avolon	620.5	620.6	618.0	618.4	618.6	618.3	618.7	618.9
B18	2937	Avolon	621.5	620.9	618.0	618.5	618.6	618.4	619.0	619.2
B19	625	Cassie	621.3	618.0	618.4	618.9	619.0	618.7	619.2	619.4
B20	2913	Avolon	622.0	622.1	618.9	619.4	619.5	619.3	619.7	619.9
B20A	2913	Avolon	621.2	621.3	618.9	619.4	619.5	619.3	619.7	619.9
B21	628	Cassie	622.7	622.8	618.9	619.4	619.5	619.3	619.7	619.9
B21A	628	Cassie	621.7	621.8	618.9	619.4	619.5	619.3	619.7	619.9
B22	636	Cassie	622.8	622.9	618.9	619.4	619.5	619.3	619.7	619.9
B22A	636	Cassie	621.8	621.9	618.9	619.4	619.5	619.3	619.7	619.9
B23	640	Cassie	622.7	622.8	618.9	619.4	619.5	619.0	619.6	619.8
B41	657	Barber	624.0	624.1	618.9	619.4	619.5	619.5	619.8	620.0
B41A	647	Barber	623.8	623.9	619.5	619.9	620.0	619.7	620.1	620.3
B41AA	657	Barber	622.5	622.6	618.9	619.4	619.5	619.5	619.8	620.0
B41AAA	647	Barber	622.8	622.9	619.5	619.9	620.0	619.7	620.1	620.3
B42	2905	Avolon	621.6	621.7	619.5	619.9	620.0	619.6	620.0	620.2
B42A	637	Barber	623.9	624.0	619.5	619.9	620.0	619.7	620.1	620.3
B42AA	2905	Avolon	621.0	621.1	619.5	619.9	620.0	619.6	620.0	620.2
B42AAA	637	Barber	622.1	622.2	619.5	619.9	620.0	619.7	620.1	620.3
B43	628	Barber	623.4	622.4	619.8	620.3	620.4	620.2	620.5	620.7
B44	636	Barber	622.7	622.8	619.8	620.3	620.4	620.2	620.5	620.7

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
B44A	636	Barber	621.7	621.8	619.8	620.3	620.4	620.2	620.5	620.7
B45	642	Barber	623.5	623.6	619.8	620.3	620.4	620.2	620.5	620.7
B45A	642	Barber	622.5	622.6	619.8	620.3	620.4	620.2	620.5	620.7
B46	648	Barber	623.7	623.8	619.8	620.2	620.3	620.0	620.3	620.5
B46A	648	Barber	622.8	622.9	619.8	620.2	620.3	620.0	620.3	620.5
B47	654	Barber	622.5	622.6	619.7	620.1	620.2	619.9	620.2	620.4
B47A	654	Barber	621.6	621.7	619.7	620.1	620.2	619.9	620.2	620.4
B48	660	Barber	622.6	622.7	619.6	620.4	620.6	619.8	620.1	620.3
B48A	660	Barber	622.1	622.2	619.6	620.4	620.6	619.8	620.1	620.3
B57	2848	Avolon	623.5	623.6	619.9	620.4	620.6	620.2	620.5	620.7
B57A	2848	Avolon	622.6	622.7	619.9	620.4	620.6	620.2	620.5	620.7
B58	2854	Avolon	623.3	623.4	619.7	620.1	620.2	619.9	620.2	620.4
B58A	2854	Avolon	622.4	622.5	619.7	620.1	620.2	619.9	620.2	620.4
B59	5902	Avolon	623.3	623.4	619.6	619.9	620.0	619.7	620.1	620.3
B59A	5902	Avolon	622.3	622.4	619.6	619.9	620.0	619.7	620.1	620.3
B60	2906	Avolon	623.3	623.4	618.9	619.4	619.5	619.5	619.8	620.0
B60A	2906	Avolon	622.3	622.4	618.9	619.4	619.5	619.5	619.8	620.0
B61	2910	Avolon	622.6	622.7	618.9	619.4	619.5	619.3	619.7	619.9
B61A	2910	Avolon	621.8	621.9	618.9	619.4	619.5	619.3	619.7	619.9
B62	2916	Avolon	622.3	621.8	618.6	619.1	619.2	618.8	619.3	619.5
B63	2922	Avolon	622.0	622.1	618.6	619.1	619.2	618.7	619.2	619.4

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.	Street Address	(Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
B63A	2922	Avolon	621.1	621.2	618.6	619.1	619.2	618.7	619.2	619.4
B64	2928	Avolon	621.5	621.6	618.6	619.1	619.2	618.5	619.1	619.3
B64A	2928	Avolon	620.8	620.9	618.6	619.1	619.2	618.5	619.1	619.3
B65	2936	Avolon	620.6	619.1	618.2	618.6	618.8	618.5	619.3	619.5
B66	2942	Avolon	621.0	621.1	618.0	618.5	618.6	618.4	619.0	619.2
B66A	2942	Avolon	620.2	620.3	618.0	618.5	618.6	618.4	619.0	619.2
B67	2948	Avolon	621.9	622.0	618.0	618.4	618.6	618.4	619.0	619.2
B67A	2948	Avolon	621.0	621.1	618.0	618.4	618.6	618.4	619.0	619.2
B68	2954	Avolon	623.1	623.2	618.0	618.4	618.6	618.3	618.6	618.8
B68A	2954	Avolon	622.2	622.3	618.0	618.4	618.6	618.3	618.6	618.8
B69	2962	Avolon	622.5	622.6	618.0	618.4	618.7	618.3	618.6	618.8
B69A	2962	Avolon	621.7	621.8	618.0	618.4	618.7	618.3	618.6	618.8
B73	619	Fairlane	625.2	624.4	621.4	621.8	621.9	621.8	621.9	622.2
C1	301	Fairlane	626.3	626.4	620.3	621.2	621.6	620.6	621.6	622.0
C2	211	Fairlane	626.0	626.1	620.3	621.2	621.6	620.6	621.6	622.0
C3	205	Fairlane	627.8	626.3	620.3	621.2	621.6	620.6	621.6	622.0
C4	203	Fairlane	626.1	625.2	620.3	621.2	621.6	620.6	621.6	622.0
C5	2727	Campbell	626.3	626.4	620.3	621.2	621.6	620.6	621.6	622.0
C6	2720	Campbell	626.3	626.4	620.3	621.2	621.6	620.6	621.6	622.0
C7	125	Fairlane	626.1	626.2	620.3	621.2	621.6	620.6	621.6	622.0
C8	123	Fairlane	627.1	625.6	620.3	621.2	621.6	620.6	621.6	622.0

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
C9	121	Fairlane	627.4	625.3	620.3	621.2	621.6	620.6	621.6	622.0
C10	119	Fairlane	626.3	626.4	620.3	621.2	621.6	620.6	621.6	622.0
C11	117	Fairlane	626.4	626.5	620.3	621.2	621.6	620.6	621.6	622.0
C12	115	Fairlane	626.8	626.9	620.3	621.2	621.6	620.6	621.6	622.0
C13	113	Fairlane	628.9	627.4	620.3	621.2	621.6	620.6	621.6	622.0
C14	111	Fairlane	626.8	626.9	620.3	621.2	621.6	620.6	621.6	622.0
C19	110	Fairlane	627.1	627.2	624.3	624.8	624.9	624.5	624.8	625.0
C20	112	Fairlane	627.0	627.1	624.3	624.8	624.9	624.5	624.8	625.0
C21	114	Fairlane	626.7	626.8	624.3	624.8	624.9	624.5	624.8	625.0
C22	116	Fairlane	626.6	626.7	624.3	624.8	624.9	624.5	624.8	625.0
C22A	116	Fairlane	625.8	625.9	624.3	624.8	624.9	624.5	624.8	625.0
C23	118	Fairlane	626.3	626.4	624.3	624.8	624.9	624.5	624.8	625.0
C23A	118	Fairlane	625.5	625.6	624.3	624.8	624.9	624.5	624.8	625.0
C24	120	Fairlane	627.1	625.6	624.3	624.8	624.9	624.5	624.8	625.0
C25	122	Fairlane	625.5	625.6	624.3	624.8	624.9	624.5	624.8	625.0
C25A	122	Fairlane	624.6	624.7	624.3	624.8	624.9	624.5	624.9	625.1
C26	124	Fairlane	625.6	625.7	624.3	624.8	624.9	624.5	624.9	625.1
C27	126	Fairlane	625.6	625.7	624.3	624.8	624.9	624.5	624.9	625.1
C28	200	Fairlane	625.8	625.9	624.3	624.8	624.9	624.5	624.9	625.1
C28A	200	Fairlane	624.9	625.0	624.3	624.8	624.9	624.5	624.9	625.1
C29	204	Fairlane	626.5	626.6	624.3	624.8	624.9	624.5	624.9	625.1

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
C30	2717	Fairway	627.2	627.3	624.3	624.8	624.9	624.5	624.9	625.1
C47	2621	Inwood	627.6	627.7	624.8	625.4	625.8	625.2	626.0	626.3
C48	2614	Inwood	628.3	626.8	624.8	625.4	625.8	625.2	626.0	626.3
C49	2611	Fairwood	627.2	627.3	624.8	625.7	626.0	625.4	626.0	626.5
C49A	2611	Fairwood	626.3	626.4	624.8	625.7	626.0	625.4	626.0	626.5
C54	2519	Fairwood	630.7	627.7	626.5	627.3	627.6	627.0	627.8	628.1
C55	2517	Fairwood	629.7	629.8	626.7	627.6	627.8	627.2	628.0	628.3
C56	2515	Fairwood	630.3	630.4	626.9	627.9	628.0	627.4	628.1	628.6
C56A	2515	Fairwood	629.5	629.6	626.9	627.9	628.0	627.4	628.1	628.6
C57	2509	Fairwood	630.9	630.8	627.1	628.0	628.2	627.7	628.4	628.8
C58	2505	Fairwood	633.9	634.0	627.6	628.6	628.8	628.2	629.0	629.4
C59	288	Barney	636.6	636.7	631.0	632.2	632.5	631.2	632.4	632.8
C60	2504	Fairwood	633.2	633.3	628.0	628.7	629.0	628.4	629.2	629.6
C61	2506	Fairwood	633.2	633.3	627.6	628.7	628.9	628.2	629.0	629.4
C62	2508	Fairwood	633.5	633.6	627.4	628.5	628.6	628.0	628.8	629.3
C63	2510	Fairwood	632.0	631.7	627.3	628.2	628.6	625.2	626.0	626.3
C75	2610	Fairway	629.0	629.1	625.3	626.0	626.3	625.8	626.5	626.8
C76	2612	Fairway	629.0	627.5	625.0	625.7	626.0	625.5	626.1	626.6
C77	2614	Fairway	628.8	627.3	624.8	625.5	625.8	625.2	626.0	626.3

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.	Street Address	(Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
C78	206	Inwood	627.0	626.1	624.4	625.4	625.5	625.0	625.8	626.1
C79	207	Inwood	626.4	625.6	624.4	625.3	625.5	625.0	625.6	625.8
C80	2702	Fairway	626.1	626.2	624.4	625.3	626.5	624.9	625.5	625.7
C81	2704	Fairway	625.8	625.9	624.5	625.2	625.3	624.8	625.4	625.7
C82	2706	Fairway	626.9	625.9	624.4	625.1	625.3	624.7	625.3	625.6
C83	2708	Fairway	626.4	626.5	624.4	625.0	625.1	624.6	625.0	625.3
C84	2710	Fairway	627.5	626.5	624.4	624.9	625.0	624.6	625.0	625.2
C85	2712	Fairway	627.7	627.8	624.3	624.8	624.8	624.6	625.0	625.2
C86	2721	Campbell	625.7	625.8	624.3	624.8	624.8	624.6	625.0	625.2
C86A	2721	Campbell	624.8	624.9	624.3	624.8	624.8	624.6	625.0	625.2
C87	2719	Campbell	627.5	626.0	624.4	624.9	625.0	624.6	625.0	625.2
C88	2717	Campbell	625.7	625.8	624.4	625.0	625.1	624.6	625.0	625.3
C88A	2717	Campbell	624.8	624.9	624.4	625.0	625.1	624.6	625.1	625.3
C89	2715	Campbell	625.7	625.8	624.4	625.1	625.2	624.6	625.0	625.3
C90	201	Inwood	626.2	625.3	624.6	625.3	625.5	624.9	625.5	625.7
C91	200	Inwood	626.7	626.8	624.6	625.3	625.6	625.0	625.6	625.8
C92	2705	Campbell	627.3	627.4	624.8	625.4	625.8	625.2	626.0	626.3
C92A	2705	Campbell	626.3	626.4	624.8	625.4	625.8	625.2	626.0	626.3
C93	2703	Campbell	628.4	626.9	624.8	625.7	626.0	625.4	626.0	626.5
C94	2701	Campbell	628.7	627.2	625.0	625.8	626.0	625.6	626.2	626.6
C95	2619	Campbell	627.7	627.8	625.3	626.0	625.3	625.8	626.4	626.8

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
C96	2617	Campbell	628.3	628.4	625.4	626.2	626.5	625.9	626.5	627.0
C110	2507	Campbell	633.7	632.7	627.4	628.5	628.6	628.2	629.0	629.4
C111	2505	Campbell	634.2	633.5	627.4	628.5	628.6	628.2	629.0	629.4
C112	213	Barney	634.7	633.8	627.9	628.7	629.0	628.4	629.2	629.6
C115	2610	Campbell	629.6	628.8	625.8	626.8	627.0	626.3	627.0	627.4
C116	2614	Campbell	629.5	628.7	625.2	626.0	626.3	625.9	626.5	627.0
C117	2700	Campbell	629.0	627.5	625.0	625.7	626.1	625.5	626.2	626.6
C118	2706	Campbell	627.8	627.0	624.6	625.3	625.6	625.0	625.6	625.8
C119	125	Inwood	626.6	625.3	624.5	625.0	625.2	624.9	625.5	625.7
C120	2712	Campbell	627.3	625.3	624.3	624.8	625.0	624.6	625.0	625.5
C145	140	Rebecca	616.8	616.9	611.8	612.7	613.0	612.4	613.0	613.2
C146	110	Rebecca	615.5	615.5	611.8	612.7	613.0	612.4	613.0	613.2
C156	3117	Twin Oaks Dr	609.3	605.4	602.5	603.6	604.1	603.4	604.4	604.8
D1		Route 6	521.9	522.0	515.7	516.4	516.8	516.0	517.4	517.8
D2		Busch Road	522.8	521.7	515.7	516.4	516.8	516.0	517.4	517.8
D3		Busch Road	520.2	520.3	515.7	516.4	516.8	516.0	517.4	517.8
D4		Busch Road	522.8	521.9	515.7	516.4	516.8	516.0	517.4	517.8
D5		Busch Road	522.9	521.3	515.7	516.4	516.8	516.0	517.4	517.8
D5A		Busch Road	523.8	523.9	515.7	516.4	516.8	516.0	517.4	517.8
D5B		Busch Road	521.8	521.9	515.7	516.4	516.8	516.0	517.4	517.8

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
D6	2407	Deal Avenue	526.0	526.1	519.3	520.2	520.4	519.4	520.3	520.6
D6A	2407	Deal Avenue	525.1	525.2	519.3	520.2	520.4	519.4	520.3	520.6
D7	2405	Deal Avenue	524.7	523.9	519.3	520.2	520.4	519.4	520.3	520.6
D8	2403	Deal Avenue	525.1	524.3	519.3	520.2	520.4	519.4	520.3	520.6
D9	2401	Deal Avenue	523.4	523.5	519.3	520.2	520.4	519.4	520.3	520.6
D10	3911	Mary Lou	524.5	524.6	519.3	520.2	520.4	519.4	520.3	520.6
D11	3909	Mary Lou	524.7	524.8	519.3	520.2	520.4	519.4	520.3	520.6
D11A	3909	Mary Lou	523.9	524.0	519.3	520.2	520.4	519.4	520.3	520.6
D12	3907	Mary Lou	525.6	525.7	519.0	520.2	520.4	519.4	520.3	520.6
D12A	3907	Mary Lou	524.7	524.8	519.0	520.2	520.4	519.4	520.3	520.6
D15	3912	Mary Lou	524.5	524.6	519.2	520.3	520.6	519.4	520.3	520.6
D15A	3912	Mary Lou	523.7	523.8	519.2	520.3	520.6	519.4	520.3	520.6
D16	2404	Deal Avenue	524.5	523.6	519.3	520.3	520.6	519.4	520.3	520.6
D19		Route 6	519.2	519.3	515.1	516.7	517.2	515.5	516.9	517.2
D20		Route 6	519.7	519.8	515.1	516.7	517.2	515.5	516.9	517.2
E1			583.1	583.2	578.4	579.4	579.6	578.6	579.4	579.8
E2			584.1	584.2	578.4	579.4	579.6	578.5	579.5	579.8
E2A			583.1	583.2	578.2	579.0	579.3	578.3	579.2	579.6
E3			583.2	583.3	578.3	579.3	579.6	578.4	579.3	579.8
E4			583.2	583.3	578.3	579.3	579.6	578.4	579.3	579.8

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Eval No.	Identification Street Address (Description)	Building Elevation First Floor	Low Water Entry	Present Conditions 10% Chance	1% Chance	0.2% Chance	Future Conditions 10% Chance	1% Chance	0.2% Chance
E5		582.8	582.9	578.3	579.3	579.6	578.4	579.3	579.8
E6		582.4	582.5	578.2	579.2	578.5	578.3	579.3	579.7
E7		582.7	582.8	578.2	579.1	579.5	578.3	579.3	579.7
E8		583.2	583.3	578.2	579.1	579.5	578.3	579.3	579.6
E9	1219 Albert D'ottari	582.0	578.9	578.1	579.0	579.4	578.2	579.1	579.6
E10		582.1	582.2	578.0	579.0	579.3	578.2	579.1	579.6
E11		582.9	583.0	577.9	578.9	579.2	578.2	579.0	579.5
E12		582.7	581.8	577.8	578.8	579.1	578.2	579.0	579.5
E13		582.7	581.8	577.8	578.8	579.1	578.2	579.0	579.5
E14		583.6	582.7	578.0	579 0	579.3	578.3	579.1	579.6
E15		583.5	582.6	578.0	579.0	579.3	578.0	579.1	579.6
E16		590.5	590.6	578.0	579.0	579.3	578.3	579.1	579.6
E17		590.8	590.9	578.0	579.0	579.3	578.3	579.1	579.6
E18		590.6	588.0	578.0	579.0	579.3	578.3	579.1	579.6
E19		590.6	590.7	578.0	579.0	579.3	578.3	579.1	579.6
E20		583.5	582.9	578.0	579.0	579.3	578.3	579.1	579.6
E21		582.4	582.5	578.0	579.0	579.3	578.3	579.1	579.6
E22		582.6	582.7	578.3	579.3	579.6	578.4	579.3	579.8
E23		583.4	582.5	578.3	579.3	579.6	578.4	579.3	579.8
E24		583.4	583.5	578.4	579.4	579.6	578.5	579.4	579.8
E25		584.5	583.5	578.4	579.4	579.6	578.5	579.4	579.8

APPENDIX E

LOWER ROCK RUN

FLOODPLAIN MANAGEMENT STUDY

BUILDING AND FLOODWATER ELEVATIONS

Building Identification			Building Elevation		Present Conditions			Future Conditions		
Eval No.		Street Address (Description)	First Floor	Low Water Entry	10% Chance	1% Chance	0.2% Chance	10% Chance	1% Chance	0.2% Chance
F8		Timberline Dr	608.2	601.2	598.8	600.8	601.0	600.0	601.4	601.6
F9	603	Timberline Dr	602.1	597.2	594.8	595.4	595.5	595.0	595.5	595.8
F13	3500	Bankview Lane	597.8	597.9	590.6	591.0	591.2	591.0	591.8	592.1
G1		McDonough Road	573.2	573.3	569.2	570.2	570.8	569.5	570.6	571.1
G2		McDonough Road	576.2	576.3	569.2	570.2	570.8	569.5	570.6	571.1

ENG5:32

APPENDIX F

INVESTIGATIONS AND ANALYSIS

Surveys and Mapping

All additional surveys required were performed by the State of Illinois, Department of Transportation, Division of Water Resources (DWR) as part of its contribution as co-sponsors of this study. Available information from the Joliet FIS was used when appropriate. Detailed surveys included valley cross sections and centerline of roads along with bridge and culvert dimensions for use in analyzing hydraulic characteristics. They also obtained first floor and low water entry elevations for residences, businesses and related structures for use in flood damage analysis.

Detailed topographic maps prepared by the city of Joliet in 1980 with 1 inch = 200 feet scale and 2 foot contour interval were used for the initial evaluation of the floodprone areas. These maps were used by the Division of Water Resources to prepare the base maps used for the floodplain maps in this report. The final maps were prepared at a scale of one inch = 400 feet and have been used to define the floodplain and floodway for the creeks studied.

Hydrology

Hydrologic modeling for this study was completed through the use of the SCS Computer Program for Project Formulation (Technical Release 20, Reference 9). This program is an advanced hydrologic model which simulates flood stages and discharges. The stages and discharges are related to watershed

characteristics such as drainage area, hydrologic soil group, land use and cover, time of concentration, channel characteristics and floodplain hydraulic characteristics. Given these characteristics and rainfall amounts, the model will develop hydrographs for local drainage areas and perform a specified series of channel and reservoir routings as well as hydrograph additions. The result is peak discharges, hydrograph shape, and runoff volumes at specified locations throughout the watershed.

The present condition model for this study was based on 1983 land use in the watershed area and was checked for reasonableness against the historic floods of 1982. The model used the SCS type 2 storm distribution with TP-40 twenty-four hour rainfall amounts.

The future condition model, for the year 2005, was developed by modifying runoff curve numbers and times of concentration to reflect projected urban development.

The areas that were included as developed in 2005 were based on existing zoning maps of Will County and the City of Joliet along with input from the steering committee on the areas likely to develop.

The future condition model assumes that all existing natural storage is being maintained in the watershed. This is especially important for the wetlands located between Crest Hills sewer lagoon and Jefferson (Highway 52). Also the large wetland area between I-80 and the Rock Island Pacific Railroad provides a very significant storage volume.

An evaluation was made of the impact of filling the wetlands along Rock Run. This evaluation shows an increase in peak discharges of up to 75% and an increase of flood stages of 1 to 2 feet.

The flood discharges were certified in accordance with the state Floodplain Study Review Procedure. The review was conducted by the Illinios State Water Survey with certification by the Illinois Division of Water Resources.

Hydraulics

An analysis of the hydraulic characteristics of the streams was carried out to provide stage estimates for floods of selected recurrence intervals. The water surface elevations (stage) were established utilizing the physical characteristics of the channel including channel size and shape, floodplain size and shape, bridge sizes and shapes, and estimates of Manning's roughness

coefficients. The hydraulic computations were made using the SCS Hydraulic Model WSP-2 (Technical Release 61, Reference 10). This model employs the standard step method for backwater profiles which is a computational procedure that estimates total energy at each stream cross section accounting for friction losses between sections. The bridge effects on stream hydraulics were accounted for using the Bureau of Public Roads Method. The bridge method, which is included in WSP-2, was formulated using the principle of conservation of energy. The model employs this principle between the point of maximum backwater upstream from the bridge and a point downstream from the bridge at which normal stage has been established. Culverts were also evaluated using the principle of conservation of energy and depth of headwater and tailwater, the barrel shape and dimensions, type of intlet, and shape of headwall.

The hydraulic model requires the input of peak discharges in addition to the physical characteristics listed above. The peaks were taken from the hydrologic model at appropriate locations. Starting configuration was based on estimated water surface elevations of the Des Plaines River. Manning's roughness coefficients were estimated on the basis of field observations using the SCS procedures (Reference 12). All elevations are National Geodetic Vertical Datum.

The floodway was determined for the studied reach on Rock Run, Tributary 1, Tributary 2 and Tributary 3. It was computed on the basis of equal conveyance reduction from each side of the floodplain using the SCS Floodway Computer Program (Technical Release 64, Reference 11).

Flood Damage Analysis

The economic evaluation of floodwater damages for this study was done by use of the Urban Floodwater Damage Economic Evaluation Program (URB1, Reference 15). The effects of floodwater damage were evaluated for existing land use using WSP-2 rating tables, building surveys, first floor elevations, and damage factors based on type of buildings, building values, and content values. The effects of floodwater damages were evaluated for future without project, and filled wetland alternatives.

Interviews with property owners provided economic and hydrologic basic data on historical flood events. Following the field surveys, and other basic data gathering procedures, an estimate of average annual flood damage for present conditions was computed.

Alternatives

The only alternative evaluated in detail was the non-structural because of the limited amount of existing flood damage to residential properties. The critical elements, as pointed out in this study, is the preservation of the existing opening on the I&M Canal located about 2000 feet east of the Rock Run junction with the Canal, and the preservation of existing wetlands along Rock Run. This opening directs canal overflows to downstream areas not subject to extensive flood damages. The blockage of this opening could result in future breaks occurring in areas where existing housing would be flooded as the water flows toward Rock Run Channel.

The steering committee consisted of representatives of the city of Joliet. Several local residents were invited to attend but never came to the meetings because of limited interest and minimal damages.